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A SMALL EXPORT BOUNTY.

SENATOR HANNA'S VIEWS REGARDING THE BEST METHOD OF ASSISTING AMERICAN SHPPING—ACTION MAY BE EXPECTED IN THE NEXT CONGRESS—MR. J. J. HILLS' VIEWS.

Turning aside from a long line of callers in his office in Cleveland, a few days ago, Senator Hanna of Ohio repeated the declaration that the question of a revival of American shipping lies close to his heart. "A bill with this end in view would have been agreed upon by the principal interests involved and presented in the last congress," he said, "but for the war and the immediate necessity of taking up the war revenue measure. There has been no lack of interest on the part of the Philadelphia committee that took up this subject about a year ago, but the war coming on prevented our plans being carried out. Senators Frye of Maine and Perkins of California took part in all the conferences with representatives of the leading ship building and steamship companies. Their knowledge of the subject is fully recognized in Washington, and the prospects of success with a measure for the advancement of shipping have, of course, been greatly improved by the spirit of commercial expansion engendered by the war, which was almost providential in this regard.

"One of the great drawbacks to the passage of any measure of encouragement to American ships in the foreign trade has been the opposition of southern representatives. They now want the Nicaragua canal and this may be held as a leverage with them. I am of the opinion that the best form of approaching this question of encouragement to foreign shipping is to pay a small export bounty per ton on all goods exported in American bottoms for a short period of years. There is no question of the success of such a plan, and it is certainly growing in favor as against the various other methods that have met with great opposition. The time is certainly ripe for action of this kind. We have reached a point where the exports of manufactured products, according to reports of the treasury department, have for the first time in the history of this country exceeded the imports. An increase of over $100,000,000 in exports and a decrease of over $100,000,000 in imports is the record of our foreign commerce for the nine months ending Sept. 30."

Mr. Hanna then directed attention to a recent address of President J. J. Hill of the Great Northern Railroad on the subject, and gave approval to Mr. Hill's views. "I think we should begin with this export bounty," he added, "on the Pacific." Mr. Hill's address, delivered recently before the Commercial Club of St. Paul, is important for the reason that, in view of what has been said by Senator Hanna, the policy of the next congress, if Republican, will very probably be to carry out some such plan of shipping bounty as is outlined by the well-known head of the Great Northern system. Mr. Hill's subject was Asiatic commerce. He said in part:

"We can no longer be bound by the limits of the American continent. The people of this country are a commercial people and they will trade with other people. The products of our farms, our mines and our factories constitute the main wealth of the nation. We can today furnish, and we do furnish, more of the staff of life than any other nation in the world. We have the implements, mechanical appliances, either on the farm or in the factory or mill, which make the labor of a man equal to that of from four to five men in other nations. Our nation today is sending pig iron to twenty-seven European cities. We are shipping steel to Belfast and to the Clyde, with which to build British ships. Transportation on land in the United States is a little less than 40 per cent. of the average cost of transportation on the continent of Europe, but just as soon as we take our commodities to the salt water the other nations make us drop our bundles and they carry them at our expense and make us pay them for doing our work. The commerce of the Atlantic is carried, you may say, by steam ferries, leaving almost every hour of the day from one side or the other of the Atlantic ocean. The people of the United States cannot, under existing circumstances, extend their commerce in that direction without long continued effort and patience. But on the other hand, lying to the west of us, is one-third of the population of the globe. To the west is the field for effort. Practically we have now but one customer. Great Britain buys from two-thirds to three-fourths of everything we sell, and if we lost that customer, we would be very poor indeed.

"We must as a nation find new people to trade with; people who have heretofore not bought our products; we must have more than one customer, and we can. I will briefly suggest how we may. If this country would encourage the up-building of a merchant marine to carry our products to the markets where they will bring the most money. I might say that a ship of 5,000 tons capacity, leaving the Pacific coast every day in the year, would carry 1,500,000 tons annually across the Pacific ocean to Asia. What would it cost? A bonus of $2 per ton would insure the building of ships as fast as the ship yards could turn them out. Two dollars per ton would amount to $3,000,000 per year. What a small sum is this compared, for instance, with a river and harbor bill with all its politics? The government can establish and does establish our commercial relations with other people. The state and the state's statesmen cannot do it.

"Now, why do I say to take the products of the Pacific states and carry them to Asia. I say that, if the surplus wheat from the Pacific coast was carried to Asia, in place of being carried to Europe, and there compete with the agricultural products of the states east of the Rocky mountains, you would advance the price of wheat from 10 to 20 cents per bushel. It would reduce the exports to Europe from the United States from 100,000,000 bushels to 60,000,000 or 70,000,000 a year, and that 60,000,000 or 70,000,000 from the Atlantic states is held until the foreigner sends his order here to buy it. Not so with that from the Pacific coast. It is gathered together and loaded on ships and sent on a four months' voyage to Europe to find a market, and, when it arrives, it is sold at auction for what it will bring. They buy it at their own price. If we can take it to Asia and find new people to eat it, we will have taken one step in the right direction. Go back and read the history of the world. The nation that has controlled the trade of the Orient has held the purse-strings of the world.

"Let it be understood among you everywhere, Republicans and Democrats alike, that you will not give your political support or strength to anybody who will not undertake to carry the flag of American commerce onto every sea. When you have done that, our country will have taken her proper place. She cannot stand still. She must go ahead or go backwards. If the present changes in the Orient bring about the results in China that have been brought about in Japan, you will find a greater development of trade on the Pacific ocean in the next twenty-five years than the world has ever seen in its history.

"You may be a little surprised when I tell you that last year there were carried through St. Paul over 60,000,000 pounds of cotton going to Asia. Two years ago the Japanese were in the market for 10,000 tons of steel rails. I asked some of our American railmakers to bid. I said, I will get them there for you. They did. They made a low bid, and we made a low rate and got the rails. From that day to this there has been no difficulty in finding a market, but the present year we have refused over 60,000 tons of steel in one form or another, because we couldn't get ships to carry it to Asia. Early in March, every available foot of room was engaged until after the first of July for cotton. At Seattle, where I was a few days ago, they have a flour mill with a capacity of 1,500 barrels per day, and they cannot get shipping for 300. I saw a cable from a Chinese house at Hong Kong, asking figures on 500,000 barrels of flour. These Chinaman are made on a big pattern. It would take 2,250,000 bushels of wheat to fill that order. They wanted it delivered in Hong Kong.

"We must find new people to buy and new methods to do it, and that is something that our good government can do for us and nobody else."

VESSELS HELD ON THE ST. LAWRENCE.

Present indications are that the Atlantic Transportation Co. of New York, which recently chartered a fleet of upwards of forty lake vessels for use in the coal carrying trade on the Atlantic coast will not be able to get all of these vessels to the coast this season. The company had a separate insurance arrangement covering the voyage of the boats from Montreal to New York, with the stipulation that all the vessels were to leave Montral by a certain time. The departure of some of the barges has been delayed beyond this time and it is said that the insurance companies have refused to accept further risks. This will in all probability necessitate the wintering of the boats at Kingston. The hitch will not, of course, in any way affect the interests of the vesselmen who have made charters to the Atlantic company—that is, the boats will in no case be thrown back on their hands, although an effort may be made to induce the owners of the vessels which will be thus delayed to grant an extension and have the charters date from next spring instead of from this autumn. The lake owners who chartered vessels to the Atlantic company received checks this week covering the second month of the charter.

In this connection it is stated that the steamer Gettysburg, chartered from Alger, Smith & Co. of Detroit by the Atlantic Transportation Co., will not go to the coast by reason of an inability to go over the rapids. The vessels taken to the coast by the Atlantic company are all insured from the time of their delivery to the company at lake ports, but it is understood that the underwriters do not agree to bear losses sustained in running the rapids. At the outset the Atlantic people, after conferring with their contractor, fixed the maximum draught at 7 feet. They were so anxious to secure the Gettysburg, however, that an exception was made in her case. She was allowed an additional 4 inches, but it was found impossible to get her up even to that draught, although it is understood $2,500 was spent in shifting her boilers in the hope that it might be accomplished.

SLOW ABOUT ADDITIONAL CHARTERS FOR THE COAST.

There seems to be some doubt about the consummation, as planned, of the project of the Manhattan Steamship Co. of New York for the purchase or charter of several lake steamers to be placed on a new line from New York to Portland, Me., as outlined elsewhere in this issue. The steamer Runnels, which is now at New York, is the only lake vessel ready to enter the service of the new company. The Lloyd S. Porter, which had been chartered, met with a mishap while en route down the St. Lawrence and was sunk below Quebec. There would seem to be little chance for the recovery of the vessel, inasmuch as she is in 30 feet of water and there is a strong current in the vicinity. Insurance on the Porter aggregates $40,000. It was placed through Johnson & Higgins. The Manhattan people are understood to be still negotiating, through their general manager, N. L. Newcomb, for the steamer F. W. Fletcher, owned by F. W. Gilchrist of Alpena, and also for the steamer George Farwell, owned in Cleveland. The fact that the Viking has started on another trip up the lakes would seem to indicate that there is no chance of her going to the coast, and that it was probably never intended she should go.

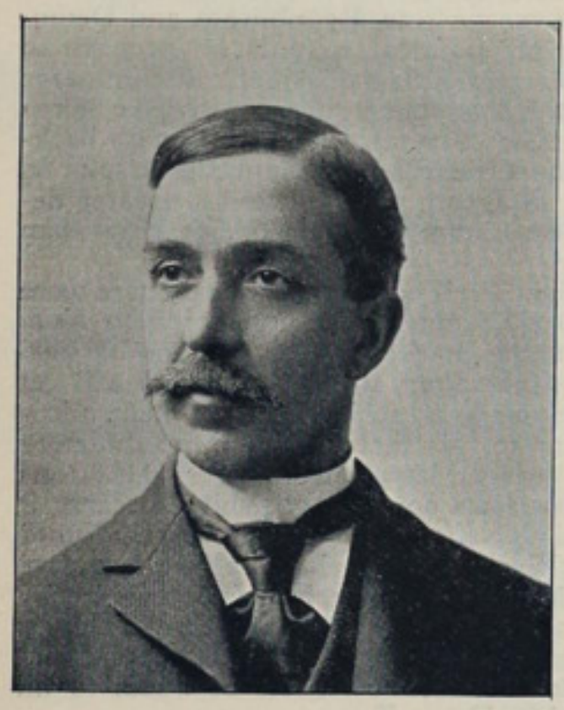
MORE SHIPS FOR THE BESSEMER LINE.

The Bessemer Steamship Co. (Rockefeller interest) is figuring with lake ship builders for an addition of two and possibly four modern steel vessels to its fleet, and it is more than probable that contracts will be announced within the next day or two. No information has been given out from the office of the Bessemer company on the subject, and the number of orders to be placed is therefore a matter of uncertainty, but the builders, who are in Cleveland figuring on the work, seem to be of the opinion that at least three vessels will be built. The extent of the orders will very probably depend largely upon delivery.

PRIZE MONEY AND BOUNTIES.

MR. FRANK MORRIS, NAVY AUDITOR OF THE UNITED STATES TREASURY DEPARTMENT, GOES INTO THE SUBJECT VERY FULLY—HE DENOUNCES THE WHOLE SYSTEM.

Mr. Frank Morris, navy auditor of the treasury department of the United States, this week accorded to the Marine Review the first extended interview which he has given on the subject of the prize money awards to be made as a result of American victories during the recent war. Mr. Morris goes into the subject very fully, and it is probable that some of his statements will come in the nature of a surprise to a great many people. As a result of the convictions forced upon him by his conduct of the prize money question since the war, Mr. Morris is radically opposed to the whole system. Entering quite earnestly into the subject, he said:



"I presume that in the days when our navy was composed exclusively of sailing vessels the prize money system served as an incentive in a certain degree and was perhaps highly beneficial in its effects. That under many circumstances, notably in connection with the capture of vessels engaged in the slave trade, it was legitimate, is equally evident, but under present conditions it seems to me that it can be classified as nothing more nor less than piracy. The importance which has been attached by naval officers to emoluments of this kind can not be mistaken, nor its significance overlooked, and it is a well-known fact that the line officers of the United States navy were, to say the least, eager for the late war, simply because of its possibilities for pecuniary compenastion.

"That the whole system of the distribution of awards is unsatisfactory and the embodiment of injustice has not, I think, been more conclusively proven than by the circumstances connected with the award of prize monies to Admirals Dewey and Sampson. The latter, who was not in reality, in any form, shape or manner in the fight at Santiago, will be given the lion's share of the aggregate of prize money, while on the other hand Admiral Dewey, whose achievements contributed more than any one thing to induce a speedy termination of the war, and who has at all times and in all ways proven the right man in the right place, will receive a sum of utterly insignificant proportions. Then again, to revert to the Santiago fight, it may be further pointed out that the men who really did the fighting will receive compensation that will be in no sense proportionate to the service rendered. It has been demonstrated that had it not been for the Oregon, the Colon and perhaps one of the other Spanish vessels would have escaped, and yet Capt. Clarke of the Oregon and Capt. Evans of the Iowa will receive in prize money no more than the captain of a vessel which was simply within signal distance and took no part at all in the fight.

"To show you how in this manner the fruits of victory fail to reach their rightful destination, I may say that in the past few months I have gone carefully over this entire question of prize money and bounties from the time of the war of 1812, and I found that in the case of the prize money accruing from the capture of vessels during the civil war, while all but 6 per cent of the aggregate sum has been drawn from the treasury department, 22 per cent of the claimants have not received the amounts to their credits. This demonstrates that the officers who had the larger amounts could and did collect the sums due them while a portion of the seamen and marines felt unable or unjustified in the slight expenditure necessary to secure the little sums due them. It is well known in service circles in Washington that this question of prize money is at the bottom of all this jealousy between Sampson and Schley. True enough, the law states specifically that one-twentieth of all prize monies shall go to the officer in command of the squadron to which the vessel making the prize belongs, whether he be within signal distance at the time of the capture or not, but it must be remembered that it was, for some time, an open question whether Schley and the vessels of the former 'White Squadron' were technically a portion of the fleet commanded by Admiral Sampson, no declaration on the subject having been made either by the president or Secretary Long. Determination of this point was the real object of the appointment of the naval board, the value of whose findings regarding the Santiago fight were so little appreciated by the general public. Had Schley's friends been able to carry their point with reference to the authority vested in the respective commanders, as well as the contention that the New York with Admiral Sampson on board was not within signal distance at the opening of the fight, Schley's prize money would have been heavily increased and Sampson's would have been correspondingly decreased. However, they failed and Sampson will receive a share of all monies.

"Another effect of this system is found in the fact that in the prospect of securing prize money lies the secret of effort on the part of Lieut. Hobson and his fellow officers to recover the Spanish vessels wrecked at Santiago. The vessels recovered will be put up at sale, and after the expenses of wrecking and repairs have been deducted, the net proceeds will become prize money. It will thus be seen that whereas the Maria Teresa and any other vessels recovered will presumably be bid in by the United States government, there is nothing to prevent their purchase by any other government. It has been estimated that the Teresa will net something like $1,000,000 in prize money, and that the prize money on the Colon, if recovered, will amount to fully $1,500,000. This will, I think, explain in part the opposition to the prize money system which has developed since the war, and I think that it is the opinion of Secretary Long and others familiar with the subject that after the present settlement the laws relating to prize money and bounties had best be taken off the statute books. It has often been asked why prize money is not allowed in the army. The reason commonly assigned, that army officers receive higher pay than the navy officers, is not the true one; to be more explicit, it would, perhaps, be best to say that the real reason is found in the fact that it would be the height of folly to invite the pillaging that would be inevitable were soldiers striving to secure prize money."

Taking up another phase of the subject, Mr. Morris said: "I am surprised at the inaccuracy of statements regarding this matter of prize money which have been made in the newspapers. I may say, too, that despite all the estimates which have been sent out, I have not in my office a single figure upon which to even base an estimate of either the aggregate amount of prize money or what any one man will receive. Of all the vessels captured only one has been disposed of and the proceeds from that sale have not yet been turned into the treasury. I have no idea that a single payment of prize money will be made before the first of the year. I have, however, a special force of clerks engaged on this work and we are preparing our books for the entry of the accounts. In this connection we have so modernized methods that much of the difficulty in finding accounts formerly experienced will be obviated; in fact we will be enabled to find the amount of prize money due any man at a moment's notice.

"A matter that will be exceedingly difficult of determination will be that of the payment of bounties due. Estimates can of course be prepared readily enoungh on the number of Spaniards captured, but according to the provisions of the law bounty in equal amount must be paid for each man drowned on the enemy's ships. We made no effort to secure this information from Cervera and his officers while they were in this country, as I am informed that it has been the custom to secure such data through diplomatic channels after the conclusion of the war. A number of attorneys representing claimants for bounties have recently contended that it was not necessary for the courts to act upon the matter of bounties as in the case of the sale of a prize. They have endeavored to induce me to secure a decision from the navy department and pay bounties from funds appropriated for that purpose during the civil war and still on hand. This I shall assuredly refuse to do, as the money in question was appropriated for a specific purpose, and no bounties will be paid in the cases of the present war until specifically authorized by congress. No claimant for bounty will in any way forward his interests by securing the services of an attorney, although to show that extent to which effort has been made in this direction, I may say that we have on file from a certain law firm more than 800 powers of attorney authorizing them to collect prize money."

Mr. Morris stated that there has been paid out on the Maine disaster over $120,000, and that settlements have now been made with every claimant who could be identified, a thing which has had no parallel in the history of the country.

The revised statutes of the United States provide that distribution of prize money shall be made on the following basis: To the commanding officer of a fleet or squadron, one-twentieth of all prize money awarded to vessels under his command; to the commanding officer of a division of a fleet, one-fiftieth of all money apportioned to vessels under his command; to a fleet captain, one-hundredth part of such monies; to the commander of a single vessel, one-tenth part of all prize money awarded to that vessel, the remainder to be distributed among all the others on board in proportion to their pay. Bounty is allowed for each person on board any ship of war belonging to an enemy sunk or destroyed in an engagement at the rate of $100 per man if the enemy's vessel was of inferior force and $200 per man if of equal or superior force, to be distributed pro rata.

In explaining the method to be followed in determining the amount of prize money payments, Mr. Morris said: "After the shares for the various commanders have been deducted, we shall find the aggregate salary list of each United States vessel, and this, by comparison with the aggregate amount to be distributed among her crew, will enable us to establish a pro rata figure on the basis of a dollar of salary."

NOVEMBER STORMS ON THE LAKES.

The severity of recent storms on the great lakes will lend added interest to the forecast of storms for November just issued by the weather bureau. The forecast is as follows:

"November is one of the most perilous months of the season of navigation. The winds are frequently of midwinter violence and the heavy snowstorms that sometimes accompany them make navigation exceedingly difficult. As compared with October, the number of severe storms is greater; northwesterly gales continue for a longer time, and the weather is more likely to be overcast and threatening. One hundred and sixty-six storms of greater or less severity (an average of 8 per month) have passed across the lake region during Novembers of the last twelve years. Storms that pass eastward to the north of Lake Superior give brisk to high southwesterly winds over the lakes and generally little or no precipitation. These storms are not especially dangerous to navigation. On the other hand, storms which approach from the south or southwest may cause violent gales over the lakes, accompanied by rain turning into sleet and snow. The dangerous storms on the great lakes almost invariably come from some westerly direction. The violent winds are confined to the central portion of the storm, which is generally as large as the lake itself, hence there is nothing to be gained by altering the course of the ship, as might be advisable on the high seas. As has been stated on previous charts, the hardest blow almost invariably occurs with the shift of the wind to the southwest or northwest, as the storm center passes the vessel. Whether the wind shifts from southeast to southwest, or backs from northeast to northwest, depends upon the position of the vessel with regard to the storm center."

The Leyland steamship line (transatlantic) has contracted with R. & W. Hawthorn, Leslie & Co., Newcastle-on-Tyne, for a vessel for the St. Lawrence trade, which will be the largest on the river route. She will be 530 feet over all, 59 feet beam and 39 feet depth. Her engines will have cylinders of 32, 54 and 90 inches diameter by 66-inch stroke, with boilers furnishing steam at 200 pounds pressure.

NAVAL WATER BOATS.

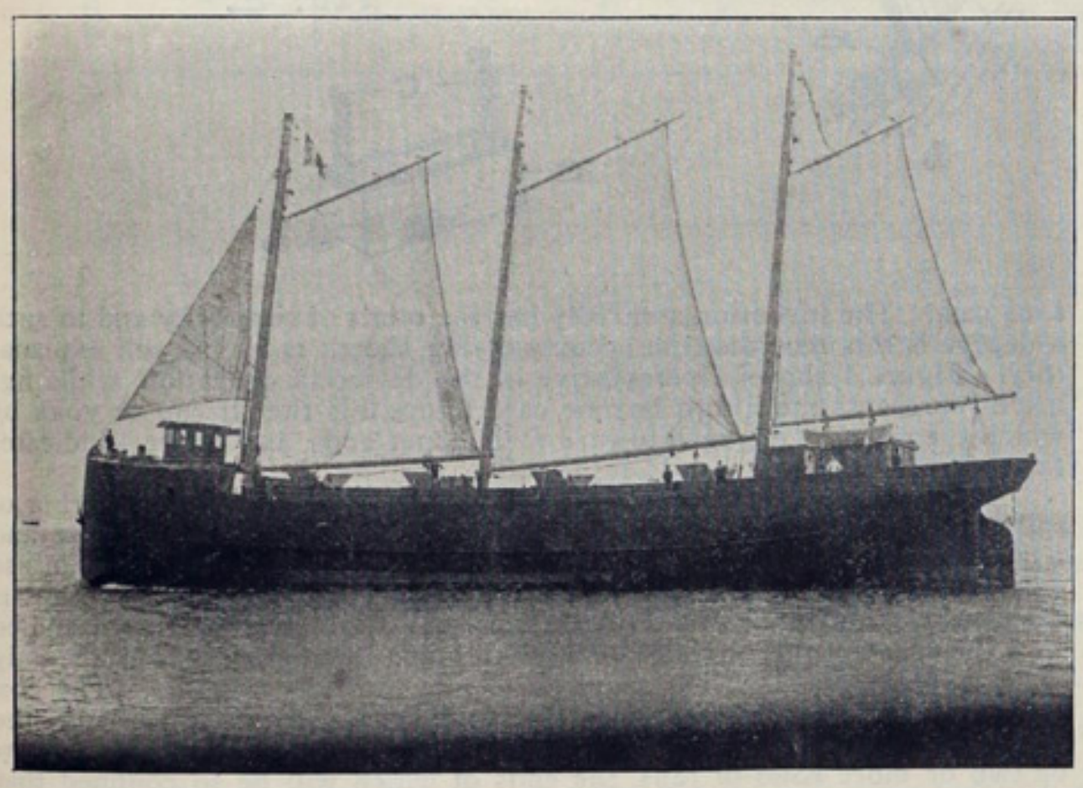
CRAFT FOR THIS SERVICE PURCHASED BY THE UNITED STATES GOVERNMENT DURING THE WAR — OTHERS NOW BUILDING.

There can not well be any overestimate of the advantage of the recent war in securing to the navy a fairly adequate fleet of auxiliary vessels. Included in the auxiliary fleet are not only the tugs, dispatch boats and converted yachts but the even more valuable repair and distilling ships, transports and water boats. That a recognition of the advantage of the latter has been reached could not be more conclusively proven than by the award by Commodore Bradford, chief of the naval bureau of equipment, to Lewis Nixon, the Elizabethport (N. J.) ship builder of a contract for three specially constructed vessels for this service, as noted in the Review last week.

The use to which these boats are put is, of course, the conveyance of fresh water to fleets either cruising or on station. All our naval vessels have condensing apparatus capable of supplying all the fresh water needed for ordinary service. It was demonstrated during the war, however, and particularly in the case of vessels on blockading service, that this is an expensive way of securing large supplies of fresh water, by reason of the heavy demands made on the engineering force and the coal supply. A realization of this fact was reached long ago by the British admiralty, and indeed it is now announced that water boats are to be provided, even for dock yard service at Portsmouth and other ports.

Vessels used by the navy as water boats during the war were secured from the Standard Oil Co. The steamer Maverick and barge No. 77 were chartered and barges No. 75 and No. 55 were purchased outright. The barges 55 and 77 were built for harbor work, while the 75, of which a picture is herewith presented is a regular coasting barge. The latter was built by the American Steel Barge Co., West Superior, Wis., in 1895, and is 170 feet over all, 33 feet beam and 17 feet deep. She has four tanks with a capacity of 400,000 gallons, and pumps capable of discharging 75,000 gallons per hour. This vessel is provided with a boiler in the forward hold to supply steam to the pumps and windlass, and for hoisting sails, and there are three steel masts, the foremast being used for a smokestack.

The Maverick is a steel tank steamer built by the Columbian Iron Works, Baltimore, in 1890, and is 250 feet in length, 36 feet beam and 23 feet depth. Engines are of 1,100 indicated horse power and capable of driving the vessel at a speed of 12 knots. There are six tanks in this vessel of an aggregate capacity of 500,000 gallons, and her pumps have



STANDARD OIL BARGE NO. 75, NOW A GOVERNMENT WATER BOAT.

an hourly capacity of 100,000 gallons. Steel tank barge No. 55 was also built by the American Steel Barge Co., West Superior, in 1891. She is 122 feet in length, 30 feet beam and 10 feet depth, and her three tanks have a capacity of 165,000 gallons. There is a small boiler for the pumps on this vessel, which are capable of discharging 50,000 gallons per hour. Barge No. 77 was built by Lewis Nixon at the Crescent ship yard, Elizabeth, N. J., in 1895, and is 144 feet over all, 23 feet beam and 11 feet depth. Her five tanks have a combined capacity of 185,000 gallons and her pumps can discharge 50,000 gallons per hour. The three vessels ordered by the government are to be built at the Crescent yard. Two of them will be 144 feet long and 22½ feet beam, and will have a draught of 8 feet and a capacity of 175,000 gallons each, while the third will be 68 feet long, 16 feet beam and 8 feet depth and will carry 30,000 gallons.

George L. Watson, the yacht designer, has prepared plans for the largest schooner yacht in the world, to be built by D. & W. Henderson on the Clyde for James Coates of Fergusville. Her tonnage will exceed 500. According to reports, Mr. Watson has been commissioned by A. G. Drexel of Philadelphia to design and have built on the Clyde a steam yacht of 2,000 tons, to replace the Margarita, sold to the king of Belgium. He is to design a 2,000-ton twin-screw yacht for an Italian gentleman, and has already placed the order for her with Scott & Co. of Greenock, and finally he has placed intsructions with the Ailsa Ship Building Co. for a steam yacht of 500 tons.

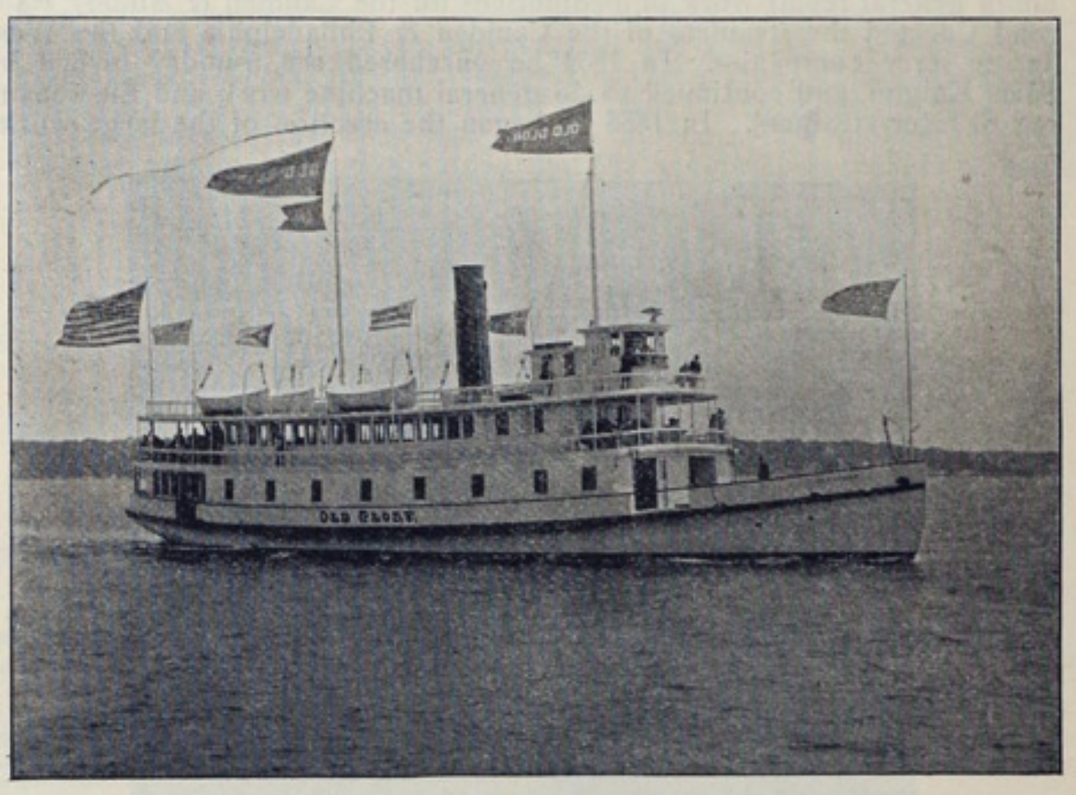
It is stated that the United States navy during the past fiscal year consumed 452,551 tons of coal, costing $2,122,005, as compared with 138,318 tons, costing $655,922, during the previous fiscal year. This would indicate that the amount of coal used during the war aggregated somewhere in the neighborhood of 300,000 tons. The average cost of coal per ton for the year was $4.67.

SPEEDY OLD GLORY.

NEW STEAMER OF THE NEW LONDON AND SAG HARBOR STEAMBOAT CO.—HER BRUSH WITH THE CONVERTED YACHT AILEEN.

Some interest has recently been attracted in eastern shipping circles by a little brush of speed between the steamer Old Glory, completed a short time ago by the Robert Palmer & Son Co., of Noank, Conn., for the New London & Sag Harbor Steamboat Co., and the converted yacht Aileen of the United States auxiliary fleet, then acting as a patrol boat at Camp Wikoff. The Aileen, according to her navigator, was making just 16¾ knots per hour and the Old Glory held her for ten miles in Block Island sound.

The Old Glory is 140 feet over all, 27 feet beam and 10 feet depth; has a 3-foot guard and is modeled on easy lines. The keel, stem and stern post are of white oak; the frame of oak, chestnut and hackmetac; the keel-



STEAMER OLD GLORY, BUILT BY ROBERT PALMER & SON CO.

sons, ceiling and planking of yellow pine; the deck of 3 by 3-inch white pine and the plansheer, guard and lining of white oak, all of long lengths and thoroughly fastened. On the main deck is a freight room (42 by 31 feet in size), engine boiler and toilet rooms. The after cabin is 23 feet long, and with the office and cafe is finished in sycamore. The ladies' cabin is finished in sycamore upholstered in silk tapestry. On the first joiner deck, reached by an oak stairway from the after cabin, is the main saloon 64 by 25 feet and finished in cherry. From this several staterooms open. Outside this saloon and extending around the steamer is a promenade, terminating in open spaces and having a length of 12 feet forward and 20 feet aft, and extending the full width of the deck. The upper deck is 102 feet long and unobstructed save for the space occupied by the pilot house, captain's room and life boats. Power is furnished by two triple expansion engines with cylinders 10, 15½ and 26 inches in diameter by 15 inches stroke, to which steam is supplied from two Almy water tube boilers built for 200 pounds working pressure and each having 44 square feet of grate surface. The Old Glory on her trial trip made 16 statute miles per hour over a measured course. New wheels of an increased diameter have been placed in the boat and another trial will be made within a few days. At a dock trial the steamer made 180 revolutions per minute and her builders believe that her speed will be increased a mile per hour by the improvement.

A TRIM NAPHTHA LAUNCH.

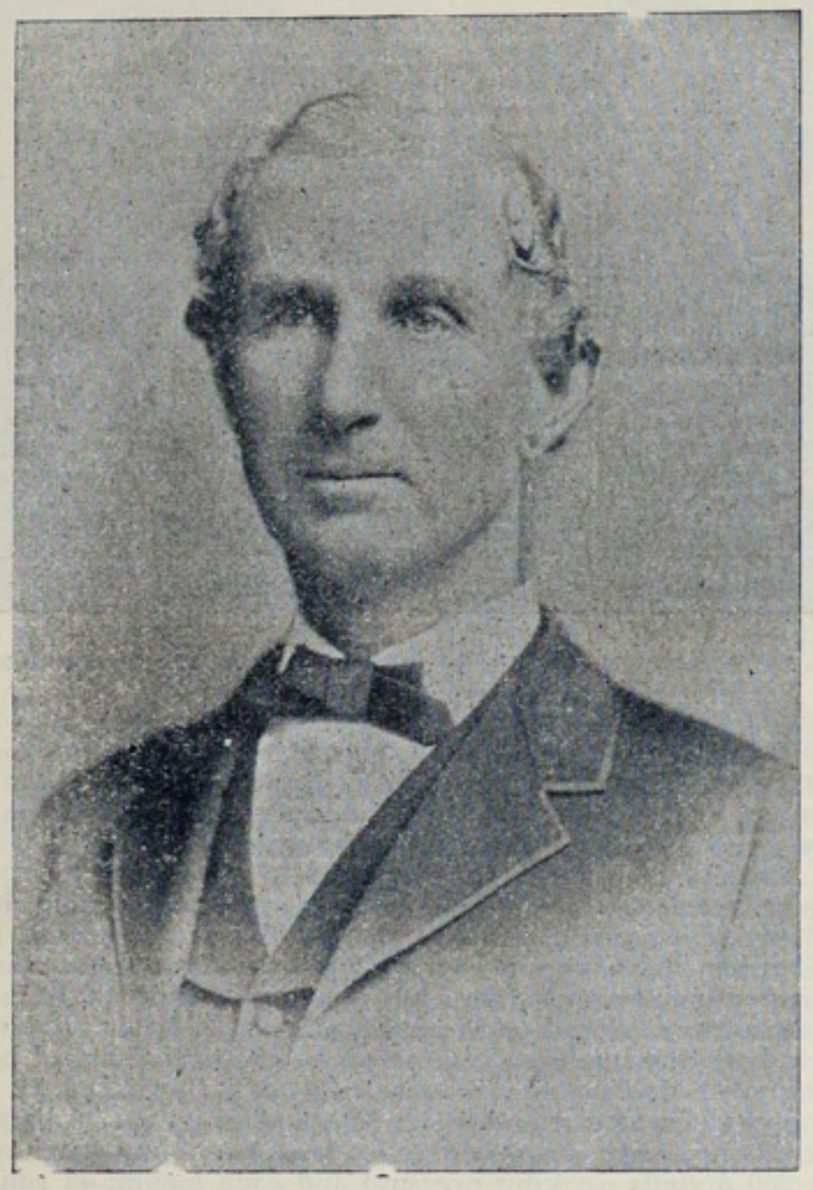
Charles P. Willard & Co. of Chicago have just completed a very handsome twin-screw, light-draught pleasure yacht or launch for Edward H. R. Green, president of the Texas Midland railroad and son of Mrs. Hetty Green. The vessel is 50 feet over all, 11 feet extreme beam outside of planking, and 2 feet draught, loaded. The frame and lower planking are of selected white oak and the remainder of the planking is cypress in long lengths. The interior of the cabin is finished is quartered oak and cypress, and the boat is heavily sheathed with copper. All trimmings, including railings, chocks and cleats are of polished brass. Motive power is furnished by two of Willard & Co.'s ten horse power simplex naphtha engines, placed in the after cockpit, which also contains two gasoline engines for driving a dynamo which supplies current to eighty incandescent lamps and a search light. A duplex system of rudders is provided for steering the craft, and in addition to the ordinary wheel in the fore cabin, there is a smaller guiding wheel in the rear cock-pit near the engine, so that the engineer alone can, in an emergency, run the vessel. The wheels are connected by one rope. The little vessel, which will be known as the Mabel, had a trial on Lake Michigan a few days since and easily attained 12 knots.

An important experiment has been made at Glasgow in the design of a cargo steamship, with a view to avoiding harbor dues. A Scotch firm has just had a 508-ton steamship built, and, while on the load line she can carry 650 tons, her net register tonnage, on which dues are calculated, is at only 79, or for every 100 tons of carrying capacity possessed by the vessel, there are apparently only 12 tons assessable for dues. In thus obtaining an exceptionally small register tonnage, a considerable saving in ordinary dues is effected. The owners declare that the requirements of a section of their trade compel them to have boats of large capacity with the smallest possible assessable tonnage.

DEATH OF JOHN H. DIALOGUE.

THE PROMINENT SHIP BUILDER OF CAMDEN, N. J., PASSES AWAY FROM AN ATTACK OF HEART DISEASE—BUILT THE GUNBOAT PRINCETON.

John H. Dialogue of Camden, N. J., one of the best known ship builders in the country and head of the firm of John H. Dialogue & Son, died last week from an attack of heart disease, from which he had been a sufferer to greater or less extent for several years. Mr. Dialogue was born in Philadelphia, in May, 1828, of French-German ancestry. His father, Adam Dialogue, was the inventor and manufacturer of leather riveted fire hose. The deceased attended the Central high school, Philadelphia, which was at that time held in a building on the site of John Wanamaker's store, and was graduated in 1846. He then learned the trade of a machinist with his uncle. During the spare hours of the evening he educated himself as a draughtsman, and in 1850, when but twenty-two years old, moved to Camden and began business. He first engaged in doing general repair work of locomotives for the Camden & Amboy Railroad Co. and the steamers of the Camden & Philadelphia and the West Jersey ferry companies. In 1854 he purchased the foundry owned by Elias Kaighn, and continued to do general machine work and the repairing of river steamers. In 1858 he began the erection of the large works



THE LATE JOHN H. DIALOGUE.

at Kaighn's point, and after their completion in 1859 removed to them, and with enlarged facilities, he continued the manufacture of Corliss engines under a license from the inventor.

In 1870 the name of the establishment was changed to the River Iron Works, with Dialogue & Wood as proprietors, and they engaged in the iron ship building business. In 1871 the United States steamship Colfax was built at the works. This was one of the first iron vessels which the revenue marine department of the government ordered. He also built the Philadelphia ice boat No. 3. In 1874 he built the first compound engine tugboat, the George W. Childs, and then added the building of compound engines at his works, as a leading branch of his business. In 1876 he received the contract to reconstruct the United States frigate Constitution, familiar in the annals of American history. He also built the United States steamer Hassler, which Professor Louis Agassiz, the naturalist, used in his South American tour, and the gunboat Princeton and tug Hudson, both of which did service in the recent war.

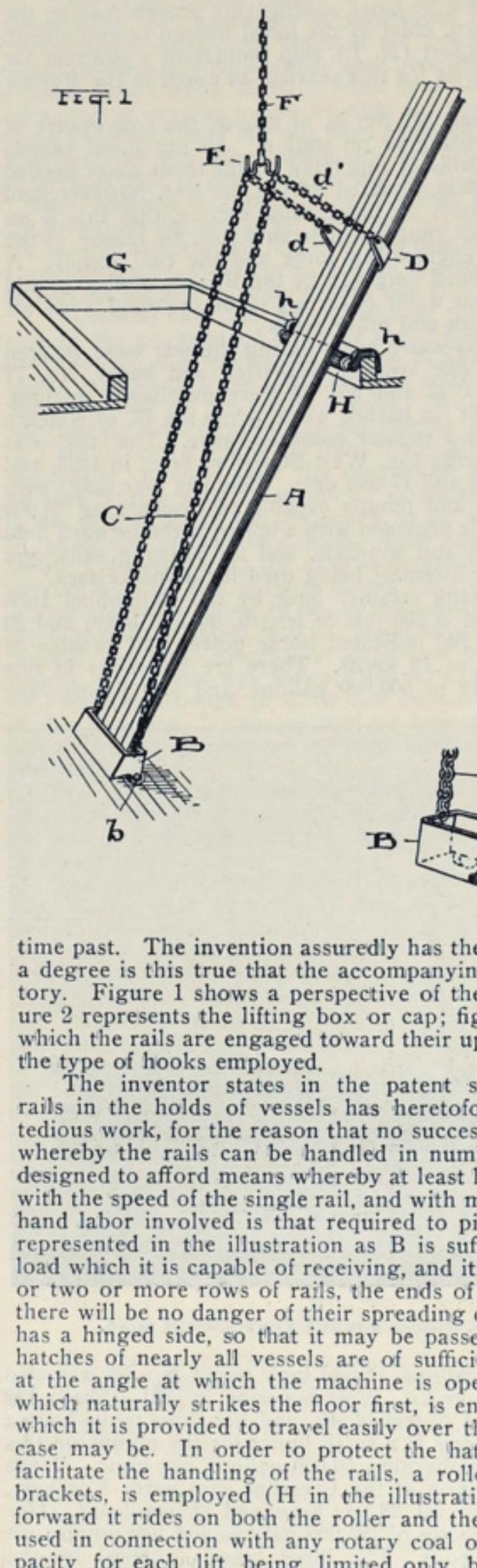
The hope expressed from West Bay City that the Wheeler ship yard at that point will be reopened through an effort to reinstate F. W. Wheeler in the works is probably without foundation. Either F. W. Wheeler & Co. or Mr. Wheeler himself would have some very stiff claims to meet and a bad tangle to unravel before the West Bay City ship yard could be opened. Any work done at the yard by the bondholders is probably simply for the purpose of preventing decay in the plant.

The Philadelphia board of health, after a thorough investigation, has amended the building laws, so as to permit the installation of the Kenney system, by which one tank is used to supply one or more closets instead of individual tanks, as was formerly required. Kenney flushometers, manufactured by the Kenney Co. of New York city, are in use on several vessels of the United States navy, on war department transports, and on the Albany Day Line steamers of the Hudson.

A recent steam trial of new machinery in the United States cruiser Chicago was highly satisfactory in every respect. This vessel is thoroughly equipped with Davidson pumps, including independent vertical marine air pump.

DEVICE FOR HANDLING STEEL RAILS.

The Carnegie Steel Co. has been shipping large quantities of steel rails through Conneaut, O., of late, most of them destined for northwestern railways. Conneaut is the lake terminus of the Carnegie ore railway. Probably 50,000 tons of these rails will be transferred from cars to vessels at Conneaut during the present season. The work of transferring this large tonnage of rails was of sufficient inportance to prompt the development of a labor-saving device, which has been patented by Capt. E. Day, superintendent of the Conneaut docks, and which has been in use for some



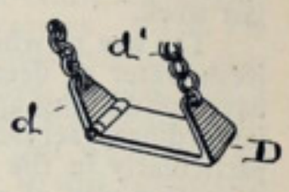


Fig. 3.

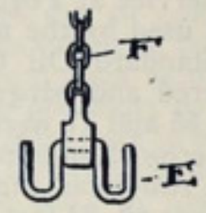
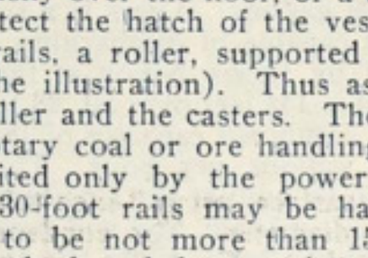


Fig. 4.

Fig. 2



time past. The invention assuredly has the merit of simplicity and to such a degree is this true that the accompanying sketch is all but self explanatory. Figure 1 shows a perspective of the device in operation, while figure 2 represents the lifting box or cap; figure 3 is the stirrup or yoke by which the rails are engaged toward their upper ends, and figure 4 indicates the type of hooks employed.

The inventor states in the patent specification that the storing of rails in the holds of vessels has heretofore been a laborious, slow and tedious work, for the reason that no successful appliances have been in use whereby the rails can be handled in numbers. The present invention is designed to afford means whereby at least half a dozen rails can be handled with the speed of the single rail, and with much less labor; indeed, the only hand labor involved is that required to pile the rails together. The box represented in the illustration as B is sufficiently strong to carry all the load which it is capable of receiving, and it may be adapted to a single row or two or more rows of rails, the ends of which will be so confined that there will be no danger of their spreading or working out. The stirrup D has a hinged side, so that it may be passed under a group of rails. The hatches of nearly all vessels are of sufficient size to admit rails inclined at the angle at which the machine is operated, and the box or carrier, which naturally strikes the floor first, is enabled by rollers or casters with which it is provided to travel easily over the floor, or a bed of rails as the case may be. In order to protect the hatch of the vessel, as well as to facilitate the handling of the rails, a roller, supported at its ends on brackets, is employed (H in the illustration). Thus as the load is sent forward it rides on both the roller and the casters. The machine can be used in connection with any rotary coal or ore handling derrick, the capacity for each lift being limited only by the power of the hoisting machinery. Ordinarily seven 30-foot rails may be handled at a time. The cost of handling is said to be not more than 15 cents a ton, as against 40 cents by the usual method, and the capacity about 800 tons per day.

In the Review of Oct. 27 it was said in an article dealing with the manufacture of Pintsch gas buoys that the Safety Car Heating & Lighting Co. of New York has been unable to find a manufacturing concern in this country that could produce these buoys. This was a mistake. The Continental Iron Works of Brooklyn send us several photographs of buoys of this type which they have made, and they say further that on several occasions they have repaired damages sustained by buoys made in Germany. The error was due to the fact that the Safety Car Heating & Lighting Co. was unable to find a manufacturing concern in the west to build these buoys when an effort was made in that direction a short time ago.

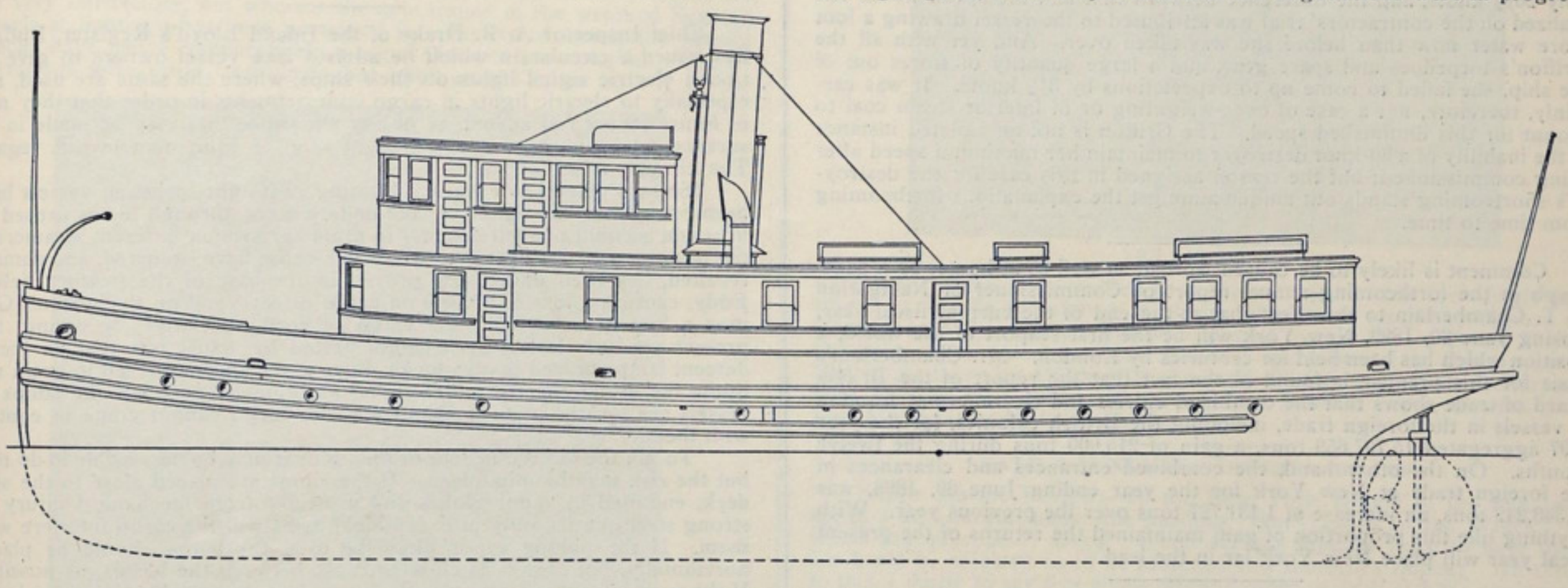
Low rate to Chicago and back via the Nickel Plate road, Nov. 10. Special train leaves Cleveland 8:00 a. m. and tickets will also be available on train No. 1 of same day, due to leave Cleveland 7:40 p. m. Round trip $5.55.
242, Nov. 10.

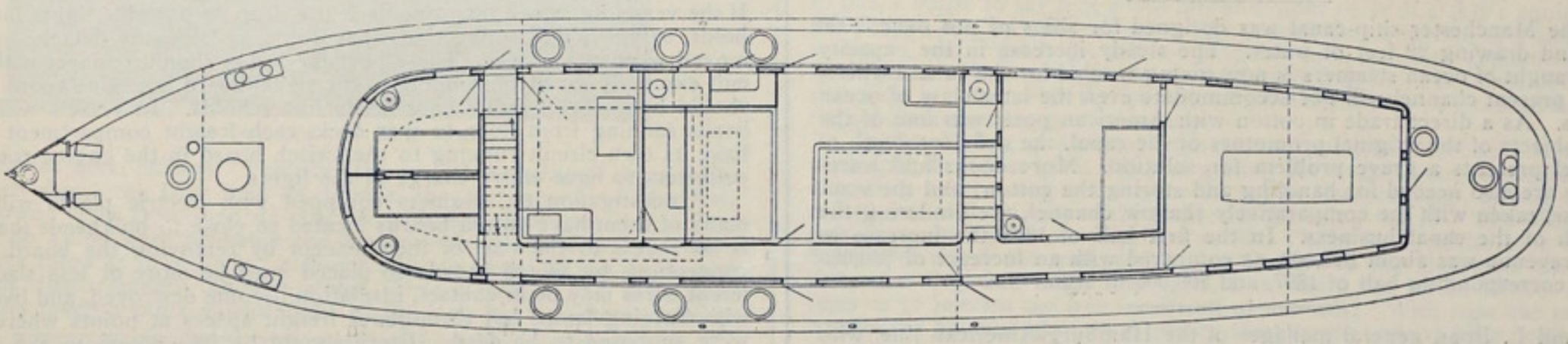
PUGET SOUND TUG.

STEEL VESSEL TO BE BUILT BY THE DETROIT DRY DOCK CO. FOR USE IN THE INSPECTION OF HARBOR WORK AND IN SURVEYING OPERATIONS.

Presentation is herewith made of the outboard and deck plans of the steel hull tugboat for use on Puget Sound, for the construction of which the Detroit Dry Dock Co. recently secured the contract. The service in which the vessel is to be engaged on Puget Sound and in Gray's harbor will include regular towing on the sound, the transportation of inspection officers from place to place and surveying work at Gray's harbor. The conditions make it imperative that the vessel should combine at once the qualities of a good sea boat and limited draught. The severity of the weather to be encountered induced E. L. McAllaster, the naval architect, formerly with the Detroit Dry Dock Co., and who designed the vessel, to plan the interior arrangement so that it will be possible to pass to any part of the vessel forward or aft without going on deck.

Dimensions of this tug will be as follows: Length of keel, 85 feet; length on deck, 94 feet; breadth, 19 feet 6 inches; depth, 11 feet; draught of water, with 20 tons of coal, 7 feet. The hull will be of open hearth steel of a tensile strength of from 52,000 to 60,000 pounds per square inch. There will be three water-tight bulkheads athwartship, and one not water-tight. Fore-and-aft coal bunker bulkheads will extend from the forward boiler room bulkhead. All woodwork in the hull will be of Puget sound white





OUTBOARD AND DECK PLANS OF THE PUGET SOUND TUG, BUILDING BY THE DETROIT DRY DOCK CO.

fir of the best quality. Hard wood floors in narrow widths, highly polished, will be worked over the deck in the after staterooms, saloon, ward room and chart room. The ceiling in the forward quarters below deck will be of cedar, while the ceiling in the after cabin will be paneled.

The engine will be of the vertical, inverted fore-and-aft compound type, with cylinders 15 and 30 inches by 20-inch stroke. There will be a piston valve for the high pressure cylinder, with a double ported slide for the low pressure cylinder and Stevenson double bar links. There will be a built crankshaft, and no pumps will be attached to the engine except a bilge pump, which will be worked from a pin in the front end of the shaft. The boilers will be 10½ feet in diameter by 10 feet in length, with a working pressure of 125 pounds. They will contain at least 1,000 square feet of effective heating surface, using 3-inch tubes, with two Morison furnaces of 40 inches inside diameter. The condenser will have at least 500 square feet of cooling surface. Feed, fire, air and circulating pumps will be provided. There will be three water closets and a bath room, and steam radiators will be fitted in the chart room, in the living quarters on main deck and in the lower cabin aft. The fresh water tanks provided will have a total capacity of 2,000 gallons. In the ship's equipment will be an electric light plant and a system of electric bells, as well as steam capstan, windlass, etc. The trial trip will consist of two hours' continuous steaming, during which the revolutions of the engine must not average less than 140 per minute, and the power must not average less than 250 horse power with a minimum of 200 horse power, indicated. The contract calls for delivery of the vessel within four months. A penalty of $30 per day will be imposed should the time of completion exceed that specified, but on the other hand, should the builders complete the boat in less than four months, they are to be allowed $30 per day for time so saved.

Bids on the construction of this tug were as follows: Wolff & Zwicker Iron Works, Portland, Ore., $38,000, government specification; $29,800, bidders' specification, wooden hull; $34,500, amended specifications; Craig Ship Building Co., Toledo, O., $47,500, government specification; $39,750, amended specifications; $36,850, composite hull; $29,750, composite hull; Detroit Dry Dock Co., Detroit, Mich., $37,000 government specification.

TRANSFER OF OLD WOODEN STEAMERS.

No little interest has been created in shipping circles on the lakes this week by the purchase of four steamers from the Inter-Ocean Transportation Co. of Milwaukee by J. C. Gilchrist of Cleveland, who recently came into notice by the charter of his ten barges to the Atlantic Transportation Co. for use in the Atlantic coasting trade, and who is acting as the representative of that company in its dealings with lake vessel owners. The vessels secured, with particulars regarding them, are as follows:

Name.	When built.	Keel.	Beam.	Ins. valuation.
Manhattan	1887	252	38	$65,000
Massachusetts	1882	235	37	60,000
Merrimac	1882	235	37	68,000
Minnesota	1880	206	36	50,000

The aggregate net tonnage of the four vessels is 4,248 and their carrying capacity in the neighborhood of 8,000 tons. Much of the surprise occasioned by the transfer was due to the low price at which the property was disposed of, Mr. Gilchrist securing the four vessels, whose aggregate valuation for insurance purposes is $243,000, for $70,000, of which amount it is understood that only $25,000 is paid in cash. The purchaser is given three years in which to pay the balance, and also has the benefit of the earnings of the boats for the remainder of this season, which is an important item. The vessels were offered for sale last autumn but it was not generally known that they were on the market at the present time, and Chicago agents, when they larned that the negotiations were in progress, offered a higher price than had been asked from Mr. Gilchrist but the deal was fixed when these offers were made. These four steamers were originally built for the iron ore trade by O. W. Potter and other stockholders of the North Chicago Rolling Mills, which was subsequently merged into the Illinois Steel Co. Three of them rate A1½, while the other is rated A2. Mr. Gilchrist has been very successful in the management of vessels of the poorer class. He figures that a small investment in ships of this kind, especially in view of the transfer of a large fleet to the coast, is more satisfactory than competition in steel ships with the big corporations that are tending more and more every day to a basis of low interest. It is understood that the $25,000 payment is not to be made until Jan. 1 and that the vessels are to be engaged from the date of sale in a contract for carrying ore from Escanaba to South Chicago at the prevailing rate, which is 40 cents, a very profitable figure.

The installation of the Blake pumps on the transatlantic flyer Kaiser Wilhelm der Grosse has been so satisfactory, especially the vertical twin air pumps, that the North German Lloyd Steamship Co. has decided to replace the present connected air pumps on the steamer Kaiser Friedrich with independent air pumps of the Blake twin system.

Merchant & Co., brass and copper tube manufacturers of Philadelphia, report that business was never better than at present in their line. They are supplying large quantities of condenser tubes and other goods of like nature for the new naval vessels and for those undergoing repairs.

Safety hollow staybolts, manufactured by the Falls Hollow Staybolt Co. of Cuyahoga Falls, O., for use in marine, locomotive and stationary boilers, are specified for thirty-five locomotives, recently ordered by the Atchison, Topeka & Santa Fe Ry. Co.

Sunday trips via the Falls River line out of New York were discontinued for the season on Oct. 30. The elegant steamers Priscilla and Puritan of this line now leave New York at 5 instead of 6 p. m. as before.

MARINE REVIEW

Devoted to the Merchant Marine, the Navy, Ship Building, and Kindred Interests.

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The discussion which has recently been engendered in this country regarding the efficacy of the high speed torpedo boat destroyer has an interesting commentary in the circumstances surrounding the recent commissioning trials of the British destroyer Griffon previous to her departure for the Mediterranean. Before the Griffon was accepted from the contractors she attained a speed of 30 knots for three hours, with her engines working at 6,000 indicated horse power. On the first attempt to obtain similar results at Devonport it was found impossible to get more than 5,500 horse power or a greater speed than 24 knots. At a subsequent trial the engines worked up to 5,970 horse power, but the mean speed was then only 26½ knots, and the difference between that and the speed which she realized on the contractors' trial was attributed to the vessel drawing a foot more water now than before she was taken over. And yet with all the Griffon's torpedoes and spare gear, and a large quantity of stores out of the ship, she failed to come up to expectations by 3½ knots. It was certainly, therefore, not a case of over-weighting or of inferior steam coal to acount for this diminished speed. The Griffon is not an isolated instance of the inability of a 30-knot destroyer to maintain her maximum speed after being commissioned; but the reason assigned in this case for the destroyer's shortcoming stands out unique amongst the explanations forthcoming from time to time.

Comment is likely to be caused, abroad as well as at home, by a paragraph in the forthcoming annual report of Commissioner of Navigation E. T. Chamberlain to the effect that at the end of the current fiscal year, closing June 30, 1899, New York will be the first seaport of the world, a position which has been held for centuries by London. Mr. Chamberlain's basis for this premise is found in the fact that the report of the British board of trade shows that the combined entries and clearances at London of vessels in the foreign trade, including the British colonies, for the year 1897 aggregated 15,797,659 tons, a gain of 215,000 tons during the twelve months. On the other hand, the combined entrances and clearances in the foreign trade at New York for the year ending June 30, 1898, was 15,343,242 tons, an increase of 1,131,727 tons over the previous year. With anything like this proportion of gain maintained the returns of the present fiscal year will place New York far in the lead.

The Manchester ship-canal was designed for ships of not over 3,000 tons and drawing 22 feet of water. The steady increase in the capacity and draught of ocean steamers is now giving trouble for the canal owners, as the present channel will not accommodate even the later class of ocean tramps. As a direct trade in cotton with American ports was one of the chief objects of the original promotors of the canal, the deficient depth of channel presents a grave problem for solution. More docks and warehouses are also needed for handling and storing the cotton; and the want of these, taken with the comparatively shallow channel, are hindering the growth of the canal business. In the first half of 1898 the increase in canal revenue was about $45,000, as compared with an increase of $80,000 in the corresponding half of 1897, and $90,000 in 1896.

Emil L. Boas, general manager of the Hamburg-American line, who has just returned from abroad, says that the company is now building twelve new steamers, five of which will be added to the American fleet. The total cost will exceed $20,000,000. The most notable of the lot will be the Deutschland, which is expected to prove the fastest passenger steamer in the world. She is 687 feet over all, 67 feet beam, 45 feet deep and of 16,000 tons, and her engines will have 34,000 horse power, which is expected to develop a speed of 24 knots. The Vulcan Co., which is building her, have turned out the Fuerst Bismarck and the Kaiser Wilhelm der Grosse.

Bulgaria is now a naval power. The cruiser Nadiejda, launched at Bordeaux on Sept. 24 last, will soon be ready for sea. She was launched in a very forward state; engines on board, funnels, and masts up. She is really a torpedo boat destroyer, being of but 750 tons displacement. The armament comprised two 6-inch Canet quick-firers in sponsons, and some 6 and 3-pounder quick-firers. She may be described as an exceedingly diminutive copy of the Russian ironclad gunboat Khravy.

It is announced that the German government expects to be able to introduce a bill in the next session of the Prussian diet for the construction of a canal suitable for large steamships between Berlin and Stettin. This design, when brought to a successful accomplishment, will practically make Berlin a seaport town. It will be remembered that Stettin was the scene the other day of the German emperor's dictum: "Our future lies on the water."

Reports from Managua, Nicaragua, are to the effect that the Nicaraguan government contends that the concession of the Maritime Canal Co. expires by limitation this month, and that President Zeloya and his ministers have about concluded negotiations with Edwin F. Crogin of Chicago and Edwin Eyer and Frank J. Washburn of New York looking to the granting of a new concession for an interoceanic canal.

A test of a new system of signaling at night has been made on the steamer Kaiser Wilhelm der Grosse. With the vessel lying at her pier at Hoboken, the signals could be plainly read from the pier of the American Line in New York, over two miles distant. The system consists of throwing the letters of the international code, one at a time, on a screen, by means of a powerful light.

Commissioner of Navigation E. T. Chamberlain has suggested that in all cases where new vessels are named or where owners change the name of a boat the new name shall not include initials, by reason of the inconvenience and confusion caused by the latter.

The United States now has under contract fifty-five warships, and twenty are nearly completed. Of the latter number, seventeen have been launched and the other three will be in the water before the close of the year.

The special naval board appointed to investigate the damage sustained by the Brooklyn during the battle of Santiago has reported that $11,297 and twenty-four days' time will be required to make complete repairs.

DEFECTS IN ELECTRIC LIGHTING.

A CIRCULAR FROM UNDERWRITERS DEALING WITH SIGNAL LIGHTS AND FIRES IN CARGO COMPARTMENTS DUE TO CARELESS WIRING, ETC.

Chief Inspector A. B. Drake of the Inland Lloyd's Register, Buffalo, has issued a circular in which he advises lake vessel owners to give attion ti electric signal lights on their ships, where the same are used, and especially to electric lights in cargo compartments in order that they may ni future secure full advantage of any allowance that may be made in insurance rates on account of the right kind of equipment in this regard. The circular is as follows:

"Serious defects in electrical lighting of freight spaces in vessels have been brought to the notice of lake underwriters, through losses caused by fires (on account of such defects) in grain cargoes on different steamers in the past few years. That fires from such cause have occurred, and damage resulted, has been undeniably proven in the case of the steamer Selwin Eddy, causing a loss of $10,000 on cargo of oats; and on the steamer German a loss of over $5,000 on cargo of corn, the latter occurring this present season. It has been demonstrated by actual test that an incandescent lamp encased in a vapor or extra globe and immersed in grain will ignite the grain; therefore there is no absolute safety unless the lamps on vessels are located in such places that the cargo cannot come in contact with them.

"To get the desired benefit of the lights it may be impossible to do this, but the risk may be minimized. If the lamps are placed close to the spar deck, enclosed in vapor globes and protected from mechanical injury by strong steel guards, only in exceptional cases will the cargo interfere with them. If the oblong vapor globe be used the lamps should be placed horizontally, but always as close to deck, between the beams, as possible. If the vessel has more than one deck use drop or portable lights for lower holds, using "plug" connections that they may be easily detached and removed when not in use. These portable lights should connect with a circuit expressly for them, running to the switchboard in engine room. There should be no fixed lights or wires in lower holds. In vessels with bulkheads running from floor to spar deck, each freight compartment should have its own circuit running to the switch board in the engine room, the engineers to have entire charge of the lights.

"Investigation on steamers equipped with electric plants will show many of them have switch boards located so close to bulkheads that there is no access to the rear of them except by removing the board. Wire connections on switch boards so placed must be more or less slack; different wires may be in contact, insulation become destroyed, and live wires with burning lamps left throughout freight spaces at points where wires were supposed to be dead. There should be free access to the rear of switch boards and the "knife" pattern switches used. It will also be found that many "cut-outs" or fuse boxes are in unsafe condition. They may be covered with a sheet of mica and the mica broken or perhaps entirely gone. The fuse may "blow out" at any time. If jute, oakum, or other highly inflammable material is close to these "cut-outs" when a "blow-out" occurs it will ignite. "Cut-outs" should invariably be enclosed in noncombustible cabinets or boxes.

"To conform to these suggestions the cost of necessary changes on vessels already equipped will not be heavy, and there will be no increase in cost of equipment in new vessels. Lake underwriters approve of the plan of locating lights, etc., as suggested, as they are satisfied that it promises the greatest safety from risk of fire. Vessels so equipped will be given proper credit in the 1899 issue of Inland Lloyds Register. The underwriters take the position, and eminent legal counsel so advise, that vessels are liable, notwithstanding the Harter act, for all damage to cargoes or vessels resulting from defective electrical equipment, and the question of whether such losses are paid, rests entirely with each individual insurance company. It is incumbent, therefore, on owners of vessels, as a measure of self-protection, to remove existing defects and have their electric equipments as nearly absolutely safe as possible.

"The question of electric lighted signal lamps has also been receiving consideration. Electric lights are liable to go out at any moment, either by the lamp burning out, by a fuse "blow out," or stoppage of dynamo from any cause. In the event of a signal light going out (particularly in close or narrow waters), there instantly arises a condition of danger, with possible damage or loss to life as well as property. If dependence is placed upon lighting an oil lamp there is always the danger of inability to do this when in narrow places in time to avert disaster. Lamps may be trimmed, etc., but the danger exists just the same. It is, therefore, the intention to bring this matter before the United States board of supervising inspectors of steam vessels at their next annual meeting. Whatever action they may take, the underwriters call owners' attention to the necessity of having, between the hours of sunset and sunrise, while navigating close or narrow waters, lighted oil lamps in globes of properly colored glass and convenient to hand for use if electrical signal lamps should be extinguished.

THE WHITE SQUADRON TO DISAPPEAR.

The "White Squadron" is likely to disappear from the American navy. The war paint taken on by our naval ships when trouble with Spain seemed unavoidable will probably be their permanent color, except in special cases of ships which it may be advisable to paint white. The present color is found well adapted to the naval service, although it is not so æsthetic as the simple white which gave to our ships the appearance of grace and beauty equalled by none of the world's navies. White is regarded as most desirable for ships serving in the tropics, but the ease with which it is blemished makes it expensive to maintain the ships always in white coats. There are a number of officers who would like to see all the vessels painted black, as they were in the days of the old wooden ships, and in time a return to this color may yet be made. At any rate, the war paint color will be retained for some time and the chances seem favorable to its being premanently adopted.—Army and Navy Journal.

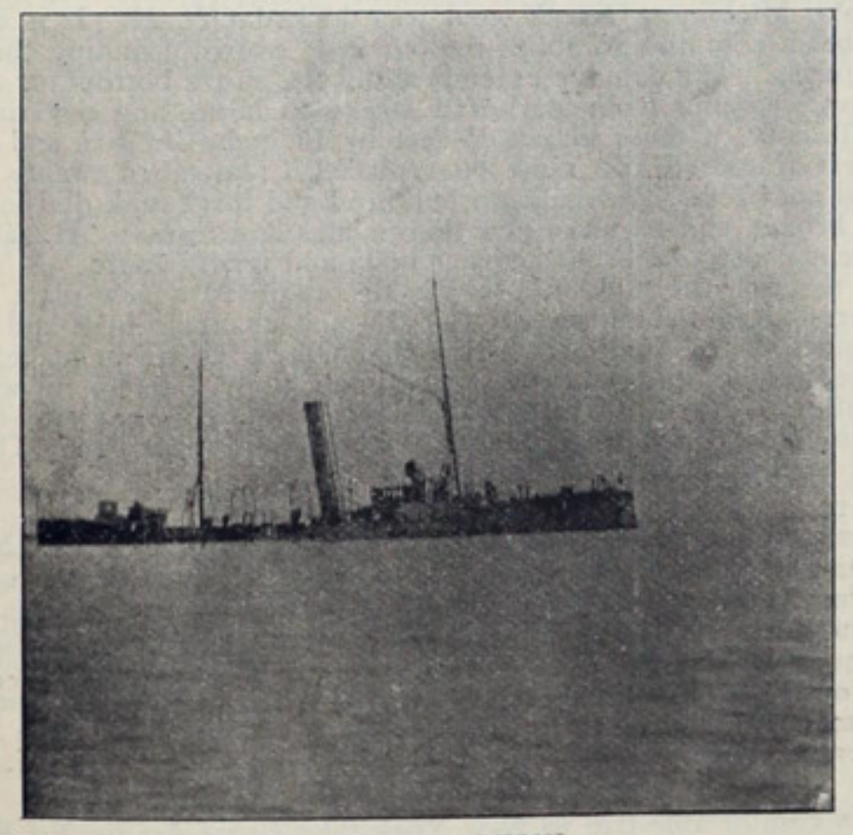
SPANISH SHIPS AT MANILA.

A FEW VIEWS OF VESSELS DESTROYED BY DEWEY'S FLEET—THEY ARE NOT VERY SATISFACTORY BUT THEY ARE AMONG THE BEST TO BE HAD.

The Review herewith presents pictures showing the present appearance of several of the Spanish vessels destroyed by the fleet under command of Admiral Dewey at the battle of Manila Bay. The pictures are not very satisfactory, but whereas the appearance of the wrecked Spanish vessels at Santiago has been portrayed in a variety of forms, the Manila wrecks have had a comparatively meagre pictorial presentation. The illustrations were made from snap-shot photographs taken by one of the

THE DON JUAN DE AUSTRIA.

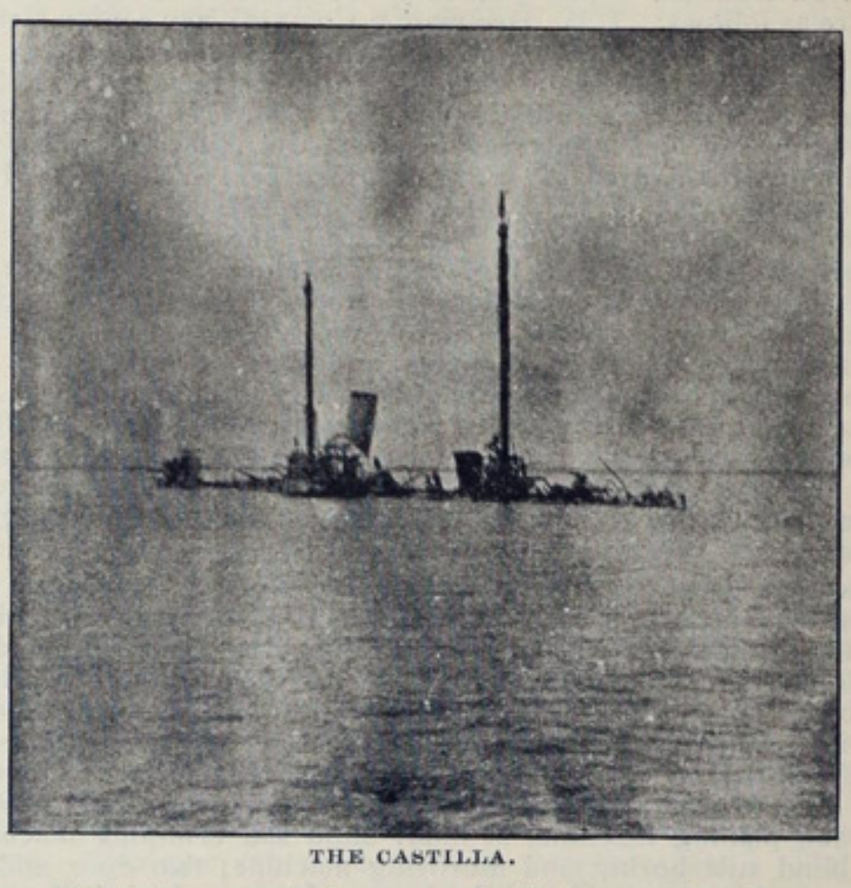
United States naval officers. Probably the most interesting of them is the one which shows the Don Juan de Austria, the last vessel of the fleet to go down. The Don Juan de Austria with her sister vessel the Don Antonio de Ulloa were probably the best vessels in the destroyed fleet. They were rated as unprotected cruisers, 210 feet long, 32 feet beam and 1,130 tons displacement. Each mounted thirteen guns. The Don Juan de Austria made a most gallant fight to the last, but was finally almost



THE ISLA DE LUZON.

completely destroyed by a large shot that struck her amidships. Her mainmast still swings back and forth with the swell. Not even were the vessel's small guns left in position for the rebels went out and stripped her at low tide.

The third rate cruiser Isla de Luzon and her sister ship the Isla de Cuba, both of which had excellent armament, lie side by side, and at low tide the havoc wrought by fire from the American guns is clearly in evidence. Probably the most complete wreck in the bay is Castilla, which lies near the flagship, burned and sunk. The Castilla was a 3,342-ton wooden vessel, and carried twenty guns. Attention has been attracted to these sunken vessels recently by two circumstances. One is the report of the United States naval constructor sent to consider the advisability of an effort to raise any of the vessels, and who the other day notified the department of the utter futility of any such attempt. The other is that much sport has been made of an advertisement by the Spanish government offering for sale certain small war vessels in West Indian and oriental



THE CASTILLA.

waters, but which is so worded as to make it appear that the vessels destroyed at Manila are among the boats which it is sought to dispose of. Of the seven Spanish war vessels captured by the United States during the war only the steel gunboat Sandoval was captured in Cuban waters. The vessel, taken by Admiral Dewey in the Philippines include the torpedo boat Barcelo, steel gunboat Alverado, iron gunboat Leyte, wooden gunboat Mindanao and iron troop ship Manila.

SAFE LAUNCHING OF LIFE BOATS.

Editor Marine Review:—In the New York Herald of the 18th inst. appears an editorial under the heading "One Lesson of the Wreck," in which the question is asked, "When will sea captains learn to have their life boats so adjusted as to be loosened at a moment's notice?" In reply to this, I desire to say that about this and other parts of a ship's equipment the captain has very little to say. He accepts the command of a ship just as she is, and if the boats are not properly equipped with appliances that would enable them to be lowered and detached quickly, the fault does not rest with him but with the owners and builders, who to economize cost regard such matters as unnecessary.

In the Mohegan disaster, from all the published accounts, it would seem that there was great delay in getting the boats swung outboard, and after they were swung out they could not be lowered away, as one of the passengers said, "owing to the tackle blocks being rusty." The Mohegan was compartively a new ship, and as Mr. Philip A. Franklin says in his defense of the double rail, which also appears in the Herald of the 18th inst., that they had daily boat drills, how could the tackle blocks be so rusty as to prevent the free rendering of the falls? With rope the proper size for the blocks and of good quality there ought to have been no trouble on account of the falls not rendering. In the use of the old-fashioned cranes, which are almost universally used, great delay and confusion occurs, as in order to swing the boat clear of the ship they must be turned outboard, first one and then the other, after which the guys must be tautened to stay the cranes. This all takes time and tends to complicate matters, which could all be obviated by the use of the style of davit which when pitched forward allows the boat to swing outboard. In the use of this style of davit much time is saved by not having to turn the cranes in order to throw the boat outboard. Nor are there any guys required, as the cranes are permanently stayed by the slots they pass through when pitched forward. This mode of swinging boats (not a new one) is in use on some of the coasting steamers, among which are the Old Dominion Line vessels.

But volumes have been written on this subject, and the object not attained. It is only when an emergency arises that the want of proper life-boat attachments is made manifest. Happily these defects do not apply to all our steamship lines, as some of them use the greatest precaution and adapt every means that will tend to the safety and comfort of their patrons. Are there no laws that bear upon this subject? If there are laws, why are they not enforced, and who is the proper authority to enforce them?

JOHN L. LAY,
Late Engineer, U. S. N.

22 State street,
New York, Oct. 22, 1898.

Immediately following receipt of the above communication the Review received the following, also from a New York correspondent:

"The American Shipbuilder of this city contains an article in its issue of the 20th inst. in answer to an editorial in the New York Herald of the 18th inst. regarding the launching of life boats. The Shipbuilder article says: 'There are devices already in existence to insure the safe launching of life boats from ships' decks, but it would require a law making it compulsory to adopt such measures to get every passenger steamship to put them on.' This is incorrect. We have laws that are specific and could be made forcible, as will be seen by reference to the Revised Statutes of the United States—4488, 4489 and 4491. The representative of the government who is directly responsible for the non-enforcement of the law is the secretary of the treasury, to whom the board of supervising inspectors of steam vessels is subordinate."

BUSY SHIP BUILDERS.

NO LACK OF CONTRACTS IN SHIP YARDS ALL OVER THE COUNTRY—SUPPLY CONCERNS FINDING AN ABUNDANCE OF WORK.

The contract for the erection and equipment of the naval coaling station at New London, Conn., goes to J. W. Hoffman & Co., Phialdelphia. Bids were as follows: J. W. Hoffman & Co., $137,500; Union Bridge Co., $125,370; John A. Meade & Co., $81,043; Riter & Conley Mfg. Co., $185,700, $155,000, $4,000; R. H. Hood Co., $173,975; McGuire & Hall, $164,980; Wellman Seaver Engineering Co., $266,677, $361,777; Berlin Iron Bridge Co., $159,900, $2,580; Engineering Contract Co., $160,000, $185,000; R. P. Staats, Incorporated, $166,000; F. W. McNeal Co., $174,998.52; Manhattan Supply Co., $323,400; C. W. Blakely & Sons, $192,000, $171,000; John A. Meade & Co. also bid $105,602. The cause of the submitting of two bids by various concerns was that the conditions along the water line allowed for either of two forms of construction. About 170 feet out from the mainland there is at present an old dock. It was a question of either building the plant on piles between the mainland and dock, or building the plant on the mainland with connection to the dock. The latter method was adopted. The plans which have been adopted were drawn up by the Brown Hoisting & Conveying Machine Co. of Cleveland. With the exception of the foundations, etc., this concern will build and equip the entire plant for J. W. Hoffman & Co. The contest for this contract was an exceedingly interesting one.

Bids have been asked for supplying the Norfolk navy yard with the following machinery and tools: One 12-inch post-shaping machine; universal milling machine, with power feed; improved universal grinding machine, 30-inch; two 16-inch screw-cutting, back-geared engine lathes, with 13-foot bed; 28-inch screw-cutting engine lathe, with back gear and 12-foot bed; 13-inch sensitive drill, with adjustable head; hydrostatic wheel press; 24-inch back-geared engine lathe; six-roll, double-surface planer; heavy pattern, outside moulding machine; automatic plug machine; power feed, joining and planing machine, 20-inch; blind slat crimping machine; improved blind stile boring and mortising machine; two door and cabinet clamping machines; one 27-inch back-geared, power feed drill press, with automatic feed and tapping attachment; 30-inch pattern makers' lathe; one deck planing machine, 10-inch; one band saw; one dado variety saw bench.

Particulars of the vessel for the Porto Rican trade for which Miller, Bull & Knowlton of New York have let the contract to the Harlan & Hollingsworth Co., Wilmington, Del., and mention of which was made in the Review last week, are as follows: Length over all, 335 feet; length on load water line, 322 feet; length from fore side of rudder post to aft side of stem, 317 feet; beam, molded, 42 feet; depth, molded at center to main deck, 19 feet 10 inches; depth, molded at center to spar deck, 27 feet 8 inches; depth at side to spar deck, 26 feet 9½ inches; draft, loaded, 19 feet; camber, main deck, 10 feet; camber, spar deck, 10½ feet. Engine to be tri-compound, with inverted cylinders 24, 28 and 62 inches in diameter by 42 inches stroke. Two boilers of Scotch type—diameter of shell, 14 feet 6 inches; length inside, 11 feet. The vessel will have six water-tight bulkheads. She will be fitted with a complete electric light plant.

The W. & A. Fletcher Co., Hoboken, N. J., has secured from the Old Dominion Steamship Co. the contract for a steamer to replace the side-wheeler Northampton, recently destroyed by fire. The vessel, which will be built at the company's yard at Newburg, N. Y., will be 190 feet long, 28½ feet beam and 11½ feet draught. She will have a speed of 18 miles. Special attention will be paid to the passenger accommodations. The two large steamers now building for the Old Dominion Co. at the Roach yard, Chester, Pa., are designed to replace the Yorktown and the Jamestown, purchased by the government for use as transports. These new vessels will be named Jefferson and Hamilton, respectively. The Jefferson will be ready to go into commission about Jan. 1, while the second vessel will, it is expected, be completed about March 1.

The Manhattan Shipping Co. has been incorporated in Trenton, N. J. According to the articles of incorporation, the company is to construct vessels of any kind or class and to do a regular ship agency business. While the office of the company is stated to be at No. 83 Montgomery street, Jersey City, the working headquarters are to be in the Produce Exchange, New York. The incorporators are Oscar L. Richard, Edwin H. Richard and Charles W. Rowley. The Richards are of the firm of C. B. Richard & Co. of No. 61 Broadway, New York.

The Wm. Cramp & Sons Ship & Engine Building Co. last week launched the steamer Admiral Schley and this week the Admiral Watson was put into the water at their yard. These vessels are sister boats of the Admiral Dewey, launched Aug. 18, and the Admiral Sampson, launched two weeks later. All four are building for the American Mail Steamship Co. The vessels are 280 feet over all, 36 feet beam and 25 feet depth, and will be equipped with triple expansion engines. Their estimated speed is 15 knots.

A yacht with carbonic acid gas as the motive power is being built at the ship yard of Capt. Louis N. Towne, at College Point, Long Island, N. Y. Its dimensions are: Length, 70 feet; beam, 7 feet; draught, 4½ feet. Compressed carbonic acid of 2,000 pounds pressure per square inch will be used in a three-cylinder engine 10 by 10 inches. It is expected that the yacht will develop extraordinary speed.

Kelley, Spear & Co., Bath, Me., will this month launch the four-masted schooner Massachusetts, building for E. C. Smith of Brooklyn. They will also launch two barges. The stocks vacated will be at once filled with new work. The vessels above mentioned will make twelve that this firm has launched this year.

Work is in progress at McKie's yard at East Boston, Mass., on a ferryboat to replace the Governor Russell, which was purchased by the government during the war. She will have sister propellers, one at each end, and compound engines, built by the Lockwood Manufacturing Co.

Charles H. Hamilton of Tacoma, Wash., secretary of the North American Transportation & Trading Co., the largest merchants and carriers in Alaska, announces that the company will this winter construct five steamers for the upper Yukon river service.

ALTERATIONS IN GOODRICH SHIPS.

Chicago, Nov. 3.—The Goodrich Transportation Co. will make extensive alterations and improvements in several vessels of its fleet this fall and winter, and the work is about to be proceeded with in order to have them all out in good condition early next season. The twin-screw steamer Virginia will have her present main saloon skylight removed and replaced by a new and more modern one of less height and more artistic. On top of the skylight and securely fastened with through bolts to cabin deck will be erected thirty-six large staterooms, to be entered from central hallways and their windows all on the outboard side. The pilot house and captain's room will be moved forward a distance of about 45 feet, to allow for part of upper tier of rooms. The present dining saloon in the forward hold will be removed, and also the cafe on main deck, to make room for freight, as it is the intention to make the Virginia the night boat out of Chicago, returning from Milwaukee the following morning. The bar and smoking room on main deck forward will be enlarged and improved as to light and ventilation. With two additional staterooms on the cabin deck added to those above referred to, the increase will be thirty-eight rooms, or seventy-eight additional berths. The passengers will dine in forward saloon on the cabin deck; a large serving room abaft it will be built on fore end of cabin trunk. The crews' quarters and accommodations generally throughout the vessel will be rearranged to suit the exigencies of the new service.

The whaleback passenger steamer Christopher Columbus will be operated as the principal excursion steamer out of Chicago daily, and will be overhauled with a view to making her equal, if not superior, to the Virginia for that service. A number of staterooms will be constructed on the promenade deck of this steamer and an elegant dining saloon on the shell deck, long enough to cover the space occupied by three of her turrets and the full width of the vessel. This will enable the passengers while dining to have an extended view of the lake, and those at the outboard tables will be situated as to view just as are the passengers of a railroad dining car. The present dining room in the hold will be re-decorated and fitted as a cafe and lunch room.

The steamer Indiana will have her present main saloon skylight removed and replaced by one of greater length and less height. On this skylight there will be built thirty-four two-berth staterooms, all securely bolted to main deck by ¾-inch diameter tie rods. The pilot house, which is at present rather far forward, will be moved aft about 9 feet and the heavy spars will be unshipped to be thinned down and given more taper. The petty officers' quarters will be built on the cabin deck forward of the pantry, transferring them from the passenger promenade deck, according to the usual arrangement in vessels of this line of late. The Indiana next season will probably be on the east shore—Chicago to Grand Haven and Muskegon, in conjunction with the Iowa. The City of Racine, which is practically a sister-ship to the Indiana, will have a similar overhaul and the same alterations and improvements made, but she will probably be kept on her present run as night boat from Milwaukee south, and from Chicago north every morning.

These alterations and improvements will increase the capacity of the Goodrich line as much as if they had added a new boat to the fleet, without materially increasing the operating expenses. All the west shore boats except the Virginia and Columbus will stop at Waukegon and Kenosha. This will give two south-bound boats daily at these points and one boat north-bound. Most of the work on these vessels will be done at Manitowoc by the Goodrich company at its own works, as the machine shop at that point has lately been about doubled in size and equipment, and a new carpenter shop has been built and fitted with improved wood working machinery.

A BIG REPAIR JOB.

A repair job now under way on the steel steamer Victory in No. 1 dock of the Ship Owners' plant, Cleveland, is of a very extensive kind. The Victory struck half a mile to the southward of Lansing shoal gas buoy, Lake Michigan, Oct. 20, and was docked Oct. 26. It is expected she will be in commission about the 5th inst., notwithtsanding the extent of her injuries. The damage extends along the ship's bottom for a length of 270 feet, crossing from starboard strake to bilge, and covering forty plates. Twenty of these plates, 15 feet by 75 inches in size and ⅝ inch thick, were fractured and must be replaced. The other twenty will be rolled and put back. The collision bulkhead and three tank divisions were bent and broken and required new floor plates and frames. It was necessary to renew also one broken girder plate and girder angle. A hole was punched through the tank top, which also required a new plate. Other items were: Renewal of seventy-two 15-inch channels bent and broken with channel 12 feet long; sixty-two channels faired up in place; seventeen bilge frames renewed with 3 by 3-inch angle 7 feet 6 inches long; fifteen futtocks faired up; eighteen girder stiffeners renewed, and 115 channel intercostals taken off, twenty of which were made new. The work was done by the Globe Iron Works Co.

It is stated that the navy department has decided to allow the Newport News Ship Building & Dry Dock Co. and the William Cramp company to construct the new 12,500-ton battleships, Missouri and Maine, for the same contract price, $2,885,000, and the Union Iron Works for the construction of the Ohio will be allowed 5 per cent. ($144,250) on that price as an extra consideration for transportation of material from eastern plants. Consequently the contract price for the Ohio will be $3,029,250. This is, of course, exclusive of armor and armament.

For a comfortable trip to New York take Pennsylvania No. 6, which leaves Union station daily at 1:40 p. m., and from Euclid avenue 1:50 p. m., arriving New York 7:43 next morning. Pullman's very best sleepers run through on this train without change. Supper is served in dining car. Note that the train stops at Euclid avenue station, saving the tedious ride down town to those living in the eastern part of the city. Phone main 1263 or east 513 for space and full information.

Chicago excursion via the Nickel Plate road leaves Cleveland 8:00 a. m. and 7:40 p. m., Thursday, Nov. 10; $5.55 for round trip. Tickets good five days. 240, Nov. 10.

TOWING PROBLEM ON THE LAKES.

PLANS FOR HITCHING TOGETHER IN REGULAR SERVICE SHIPS OF 20,000 GROSS TONS CAPACITY—THE TOWING MACHINE.

To move 20,000 gross tons of iron ore in a single tow is a problem to which considerable attention has been given of late by managers of the leading ore carrying lines on the lakes. During the past summer, the steamer Siemens of the Bessemer line (Rockefeller fleet), towing two big steel barges, brought down 17,000 tons. The Minnesota Steamship Co.'s steamer Maruba, towing the barges Martha and Constitution, brought down 15,000 tons, only a few weeks ago. But these are exceptions. As yet it cannot be said that the towing system on the lakes, notwithstanding its wonderful development, has reached that stage where the Bessemer company, for instance, would be warranted in putting two big barges like the Roebling and Fritz behind the steamer Morse in regular service. The tendency, however, is certainly in the direction of such an accomplishment. These are modern lake vessels in every respect. They represent a 20,000-ton tow. The steamer Morse, with great power, was built with the intention of towing two of the very largest type of barges. Probably she will be given a trial at such a task next season, as it is evidently the purpose of the Bessemer management to make up a big tow of this kind with the Morse, if it can be done with safety.

The difficulty, of course, is in the handling of a tow line and towing machinery strong enough to hold a second immense barge in such a tow. The task could be accomplished easily enough in mild weather, but there is always the danger, especially in the spring and fall, of weather severe enough to tax the energies of the strongest towing apparatus with only one of the modern steel barges to care for. Still it will be admitted that the movement of 17,000 gross tons of freight of any kind in towing barges, under such conditions of weather as prevail on the lakes, was unthought of before the towing machine was developed here, and it is not unreasonable to expect that the time is not far off when the system of three of the largest type of steel vessels hitched together in regular service will be a reality.

Mr. Frank S. Manton of the American Ship Windlass Co., manufacturers of the Shaw & Spiegle towing machine, which is now used entirely in the operation of tow barges, was in Cleveland a few days ago, and says it is his intention to take up the problem presented by such a tow as the Bessemer steamer Morse and the barges Fritz and Roebling. These barges are equipped with what is known as No. 4 towing machine of the Shaw & Spiegle type. This machine weighs 22,500 pounds and has 16 by 14-inch engines operating a steel wire hawser of 2 inches diameter and 1,200 feet length. Nowhere else in the world has apparatus been designed with such strength for towing purposes. Practically all of the other towing machines on the lakes are of the No. 3 type, weighing 19,500 pounds, with 14 by 14-inch engines, and carrying 1¼-inch steel wire hawser. But even with this machine there is not a single record of failure in machine itself.

It is less than five years since a towing machine was first tried on the lakes, on the Corrigan steamer Aurora, and now there are sixty-five of them in use. More than half this number (thirty-three) are on lake vessels. Two of the machines had been in use on the Boston Tow Boat Co.'s colliers Orion and Saturn before the trial on the Aurora was made, but the real development of the machine has been on the lakes. No modern towing vessels are now built without this apparatus. The manufacturers last week had an inquiry for one of the machines from South Africa and are also in correspondence with people in Australia in regard to the machine. Agents have been appointed in Liverpool (G. T. Soley & Co.) and they are dealing with the British admiralty with a view to having the machines adopted on powerful tugs that are used in and around navy yards and for various purposes in the British navy. Our own navy department recently ordered nine of the machines after learning of their advantages. Several vessels equipped with them were purchased during the war for the auxiliary naval fleet. The auxiliary naval vessels equipped with the machines are the United States colliers Saturn and Lebanon and United States tugs Potomac, Piscataqua and Gypsum King. The Potomac and Piscataqua were formerly the lake-built tugs Robert W. Wilmot and William H. Brown. The nine additional machines purchased by the government were shipped to the several navy yards. These purchases by the government were very probably prompted in part by Admiral Sampson's report of difficulties which he encountered in keeping the monitors with his fleet on account of the constant breaking of lines while they were being towed

A list of the steamship companies to whom these machines have been sold shows that orders are repeated for each new ship, especially in the case of the big corporations. Following is the list: Bessemer Steamship Co., Cleveland, nine machines; United States navy department, nine, in addition to five on vessels of auxiliary naval fleet purchased during the war; Minnesota Steamship Co., Cleveland, seven; Philadelphia & Reading Co., Philadelphia, seven; James Davidson, West Bay City, four; Standard Oil Co., New York, and James & John Corrigan, Cleveland, three each; Boston Tow Boat Co., Boston, two; American Transportation Co., Fairport, O., two; Lake Michigan Car Ferry Transportation Co., Chicago, two; New York, Philadelphia & Norfolk Railroad, two; W. G. Wilmot & Co., New Orleans, two; and one each to Inter-Lake Transportation Co. of Cleveland, Northwestern Transportation Co. of Detroit, C. W. Elphicke & Co. of Chicago, W. H. Brown & Bro. of Pittsburg, Wilson Transit Co. of Cleveland, J. B. King Transportation Co. of New York, R. Dunsmuir & Sons of Victoria (B. C.), Tuckenbach Wrecking Co. of New York, Hale & Kern Contract Co. of Portland (Ore.), Virginia & North Carolina Chemical Co. of Richmond, and R. M. Spedden Co. of Baltimore.

A good story is told about E. E. Roberts, inventor of the Roberts water tube boiler. He was senior assistant engineer of the steam frigate Colorado when she was flagship of the second division in the two attacks on Fort Fisher during the war of the rebellion. While lying in Hampton Roads, previous to the sailing of the fleet, he noticed that the ship had a slight "list," from using more coal out of the starboard bunkers than out of the bunkers of the port side. He, therefore, decided to have a brass pendulum and quadrant made and attach it to the vessel in such a position that it could be seen by the firemen. This pendulum would show whether the vessel was on an even keel or whether she had a "list," and the degree of the list would also be shown. This was made by one of the machinists on board and put in position. It could be seen through the fire room hatch and was noticed by a young deck officer who was noted for interference with the business of the engine room department. It happened that Mr. Roberts was on watch at the time the young deck officer noticed the device and an explanation was at once demanded from Mr. Roberts. His reply was that it was an apparatus for determining the direction of the wind. The young deck officer was very much puzzled but did not want to show his ignorance by further inquiry. He spoke of the matter in the ward room, however, and it came to the ears of the "first luff," who was also puzzled and requested an explanation from the designer of the apparatus. The designer told him that when he was young he had read in the bible "that the wind bloweth where it listeth" and that the list of the ship, therefore, ought to show the direction of the wind. As orders were received a few hours afterwards for sailing of the squadron to the North Carolina coast, the matter was allowed to drop.

TRADE NOTES.

The Swarts Metal Refining Co., 20 N. Desplaines street, Chicago, advertises elsewhere in this issue for scrap brass, copper and lead.

Alfred Box & Co., Philadelphia, will build four engines for the two torpedo boats to be built by Lewis Nixon at the Crescent ship yard, Elizabeth, N. J.

Under the management of Mr. J. T. Brown the marine business of the Damascus Bronze Co., Lewis block, Pittsburg, has been largely increased. Their works have lately been remodeled, and they are now able to make bronze castings up to 10,000 pounds weight.

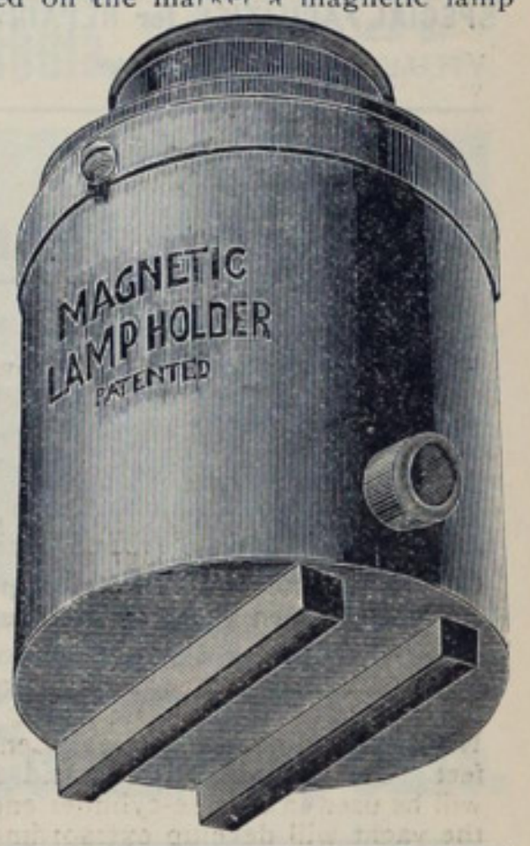
The Standard Tool Co. of Cleveland, manufacturers of twist drills, reamers, chucks, milling cutters, taps, spring cotters, flat spring and riveted keys, etc., has issued another one of its tasty price lists. The reputation which this company has achieved is all that would be expected from its motto: "No one can exist without some specialty." The Standard company has a very creditable exhibit at the Trans-Mississippi exposition.

A very complete illustrated descriptive catalogue of Pittsburg riveting machines has just been issued by the Chester B. Albree Iron Works, 16 to 30 Market street, Allegheny, Pa. An effort has been made to give such full and complete descriptions that manufacturers can determine what machine is best adapted for their particular work. The tables on rivets and riveting have been gathered from many sources and are believed to be accurate. It is claimed that such information has not heretofore been collected for ready reference, and will, it is believed, prove of value to engineers and manufacturers.

One of the most elaborate catalogues yet issued by any machinery concern in this country is that just put out by the Lidgerwood Manufacturing Co., 96 Liberty street, New York, manufacturers of improved hoisting engines, boilers and suspension cableways. The book, which comprises about 150 pages and is profusely illustrated, not only describes all the various types of machines manufactured by the company but gives a detailed representation of the installations made by the company in various parts of the country. The book is a magnificent piece of work typographically and contains a fund of valuable information regarding the latest developments in steam and electric hoisting engine manufacture.

MAGNETIC LAMP HOLDER.

Jenkins Bros. of 71 John street, New York, manufacturers of valves and standard packing, have just placed on the market a magnetic lamp holder for holding incandescent lamps. These holders, illustrated herewith, are for use where a direct current is used, and, being a magnet, will adhere to any piece of iron or steel in any position. One of the principal ways in which it is believed the holders will be found useful is for illuminating purposes in engine and boiler rooms of steamers. Its use eliminates the danger from using candles or torches. This holder can be utilized to excellent advantage in machine shops, as the lamps can, by means of it, be placed so that the light will shine exactly where wanted when operating lathe, planer, drill or other tools, and in boiler shops torches are done away with, as the lamp can be carried inside the boiler. The holders are made for Edison, Westinghouse and Thompson-Houston lamps, and are for sale at a reasonable price. In addition to their New York office Jenkins Bros. have agencies in Boston, Chicago and Philadelphia.



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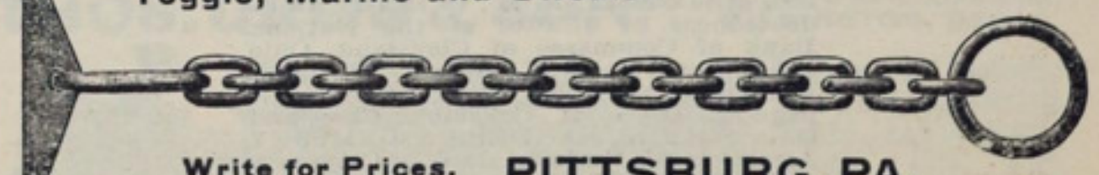
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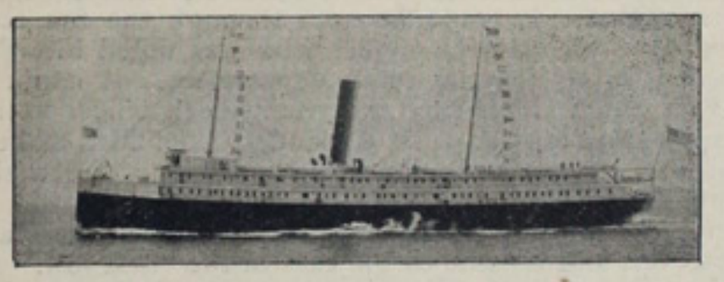

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CLEVELAND, OHIO.

NOTICE.—The steam pile driver "FISHING QUEEN", owned by John W. Averill, Jr., burden about 7.91 tons, together with boilers, machinery, anchors, cables, furniture, tackle, and all appurtenances, will be sold from the west steps of the Post Office Building, Cleveland, Ohio, on Tuesday, November 29, 1898, at 10 o'clock, A. M., to satisfy an indebtedness of $7,700.00 of the National Bank of Commerce of Cleveland, Ohio, against said John W. Averill, Jr., under a certain mortgage, recorded Book 71, page 72, Office of Collector, Cleveland, Ohio. SQUIRE, SANDERS & DEMPSEY, Attorneys for National Bank of Commerce of Cleveland, Ohio. Nov. 24.

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NOTICE.—The Pro. Tug HELENE, owned by John W. Averill, Jr., burden about 12.50 tons, together with boilers, machinery, anchors, cables, furniture, tackle, and all appurtenances, will be sold from the west steps of the Post Office Building, Cleveland, Ohio, on Tuesday, November 29, 1898, at 10 o'clock, A. M. to satisfy an indebtedness of $7,700.00 of the National Bank of Commerce of Cleveland, Ohio, against said John W. Averill, Jr., under a certain mortgage, recorded Vol. 17, page 71, Office of Collector, Cleveland, Ohio. SQUIRE, SANDERS & DEMPSEY, Attorneys for National Bank of Commerce of Cleveland, Ohio. Nov. 24.

NOTICE.—The steel steam fish pile driver "IDEAL", owned by John W. Averill, Jr., burden about 13.18 tons, together with boilers, machinery, anchors, cables, furniture, tackle, and all appurtenances, will be sold from the west steps of the Post Office Building, Cleveland, Ohio, on Tuesday, November 29, 1898, at 10 o'clock, A. M., to satisfy an indebtedness of $7,700.00 of the National Bank of Commerce of Cleveland, Ohio, against said John W. Averill, Jr., under a certain mortgage, recorded Vol. 17, page 71, Office of Collector, Cleveland, Ohio. SQUIRE, SANDERS & DEMPSEY, Attorneys for National Bank of Commerce of Cleveland, Ohio. Nov. 24.

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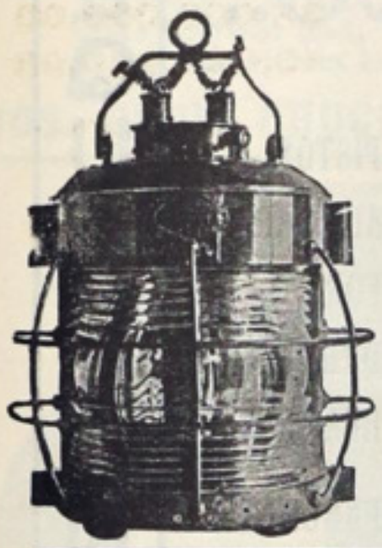

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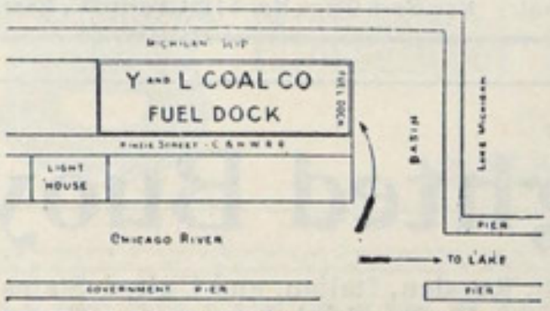

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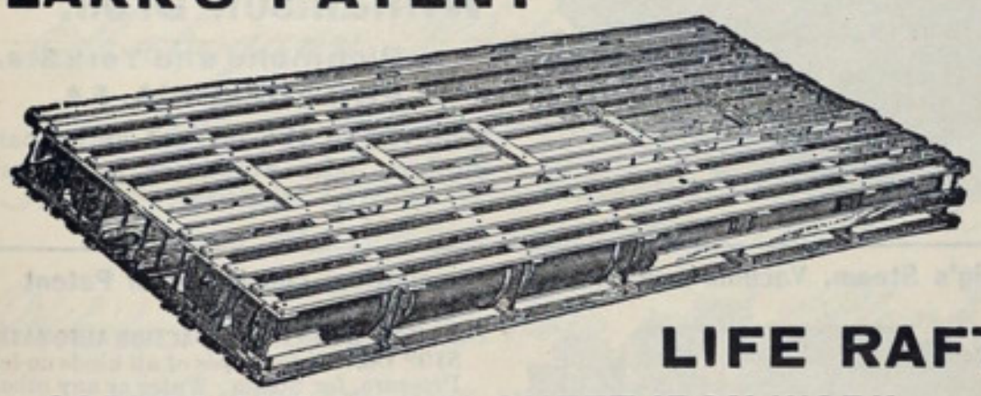

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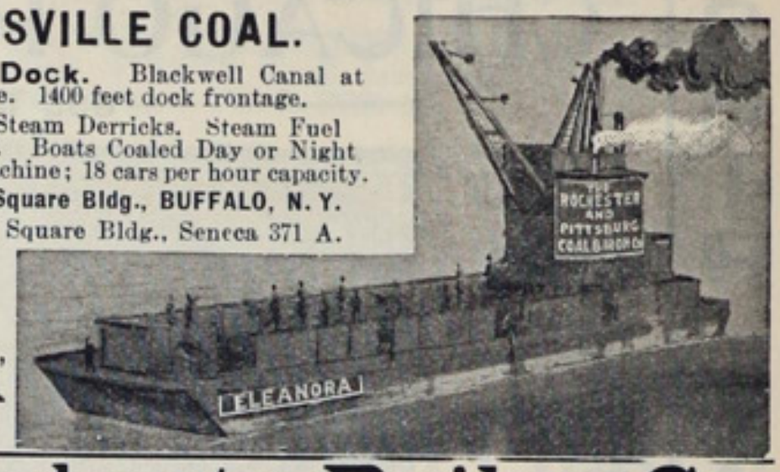

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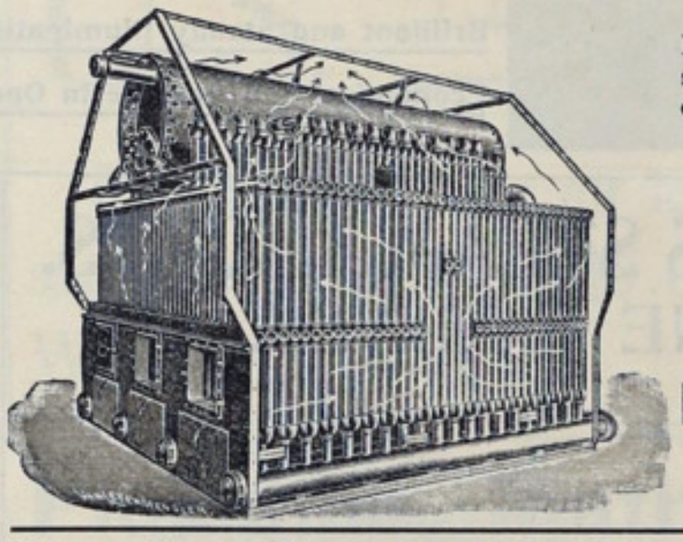

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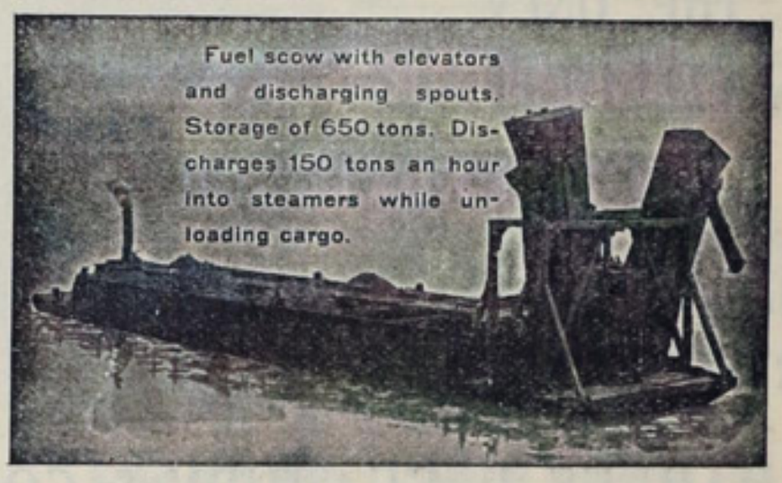
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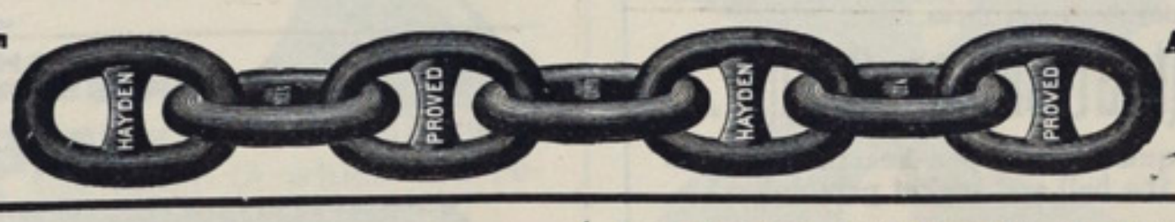

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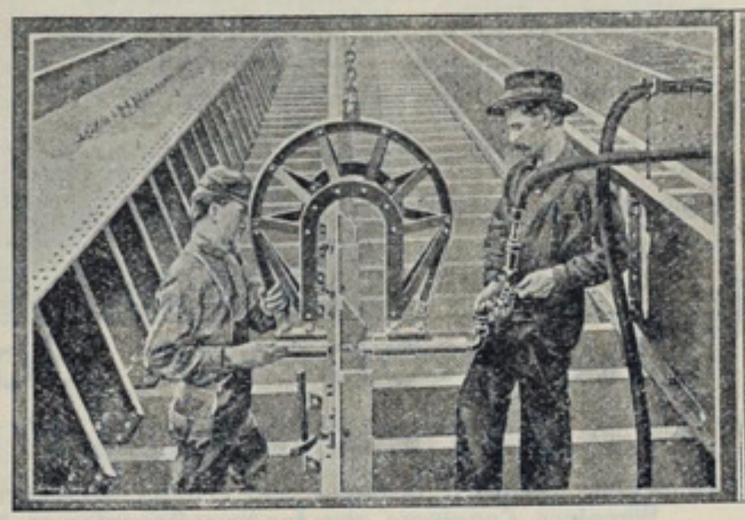

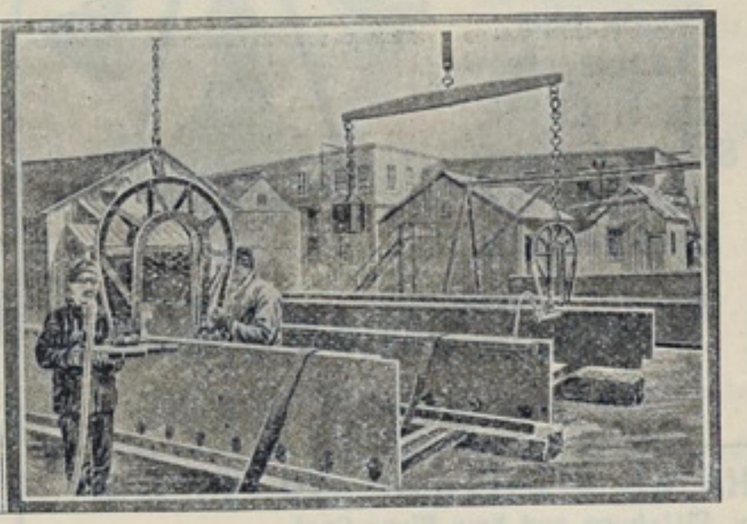

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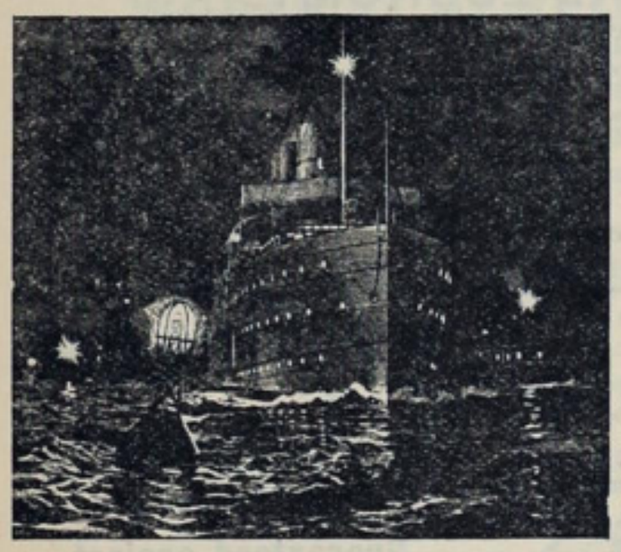

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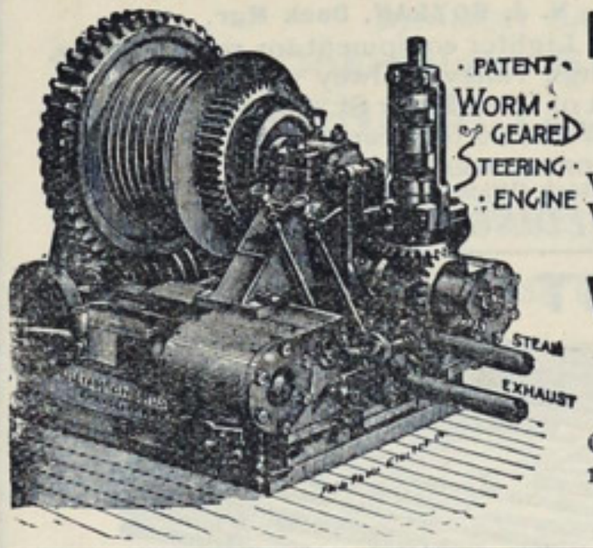

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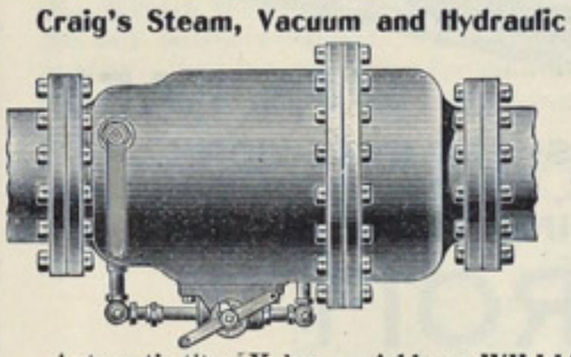

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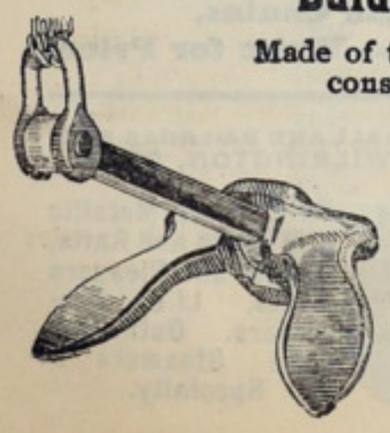

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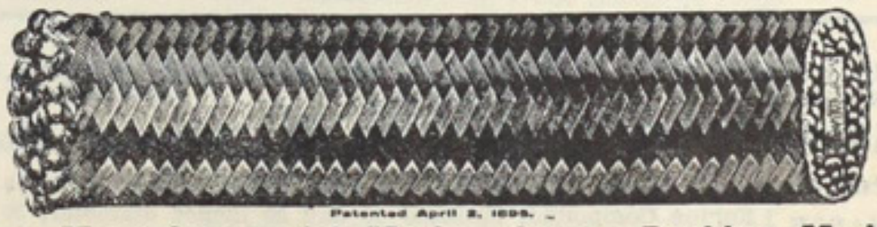

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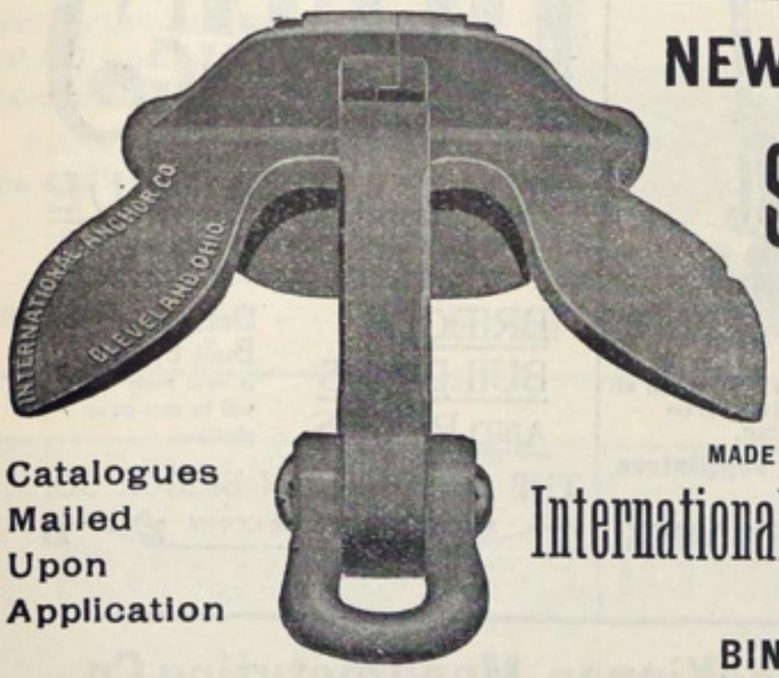

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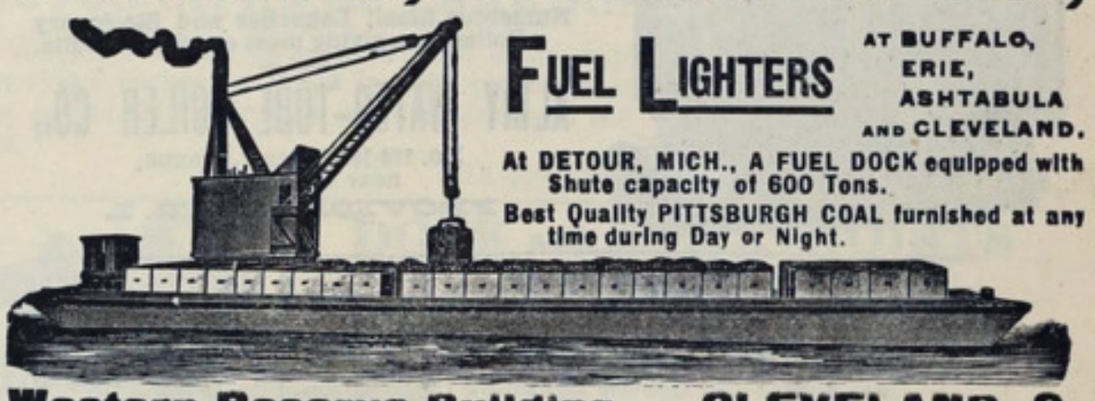

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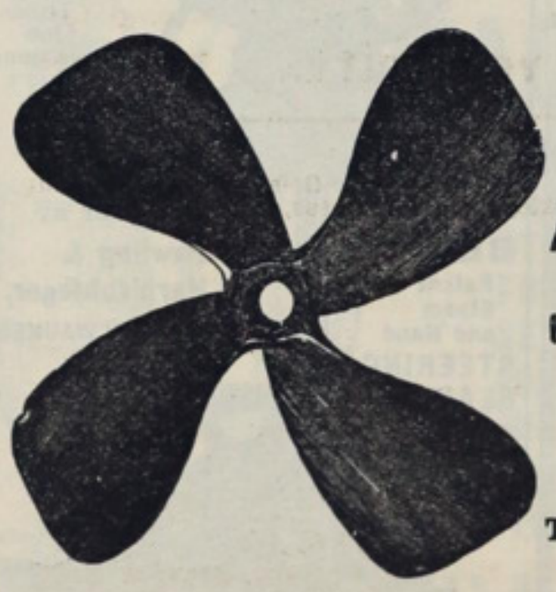

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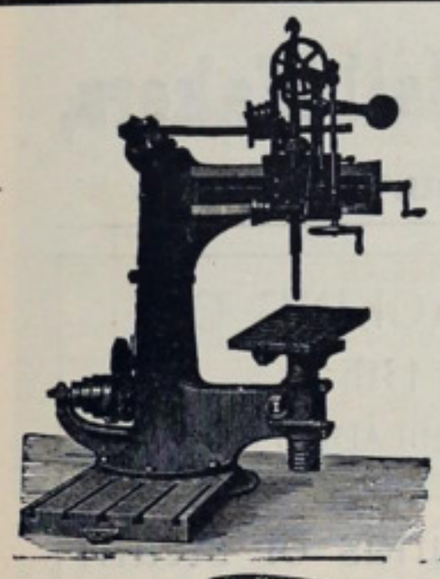

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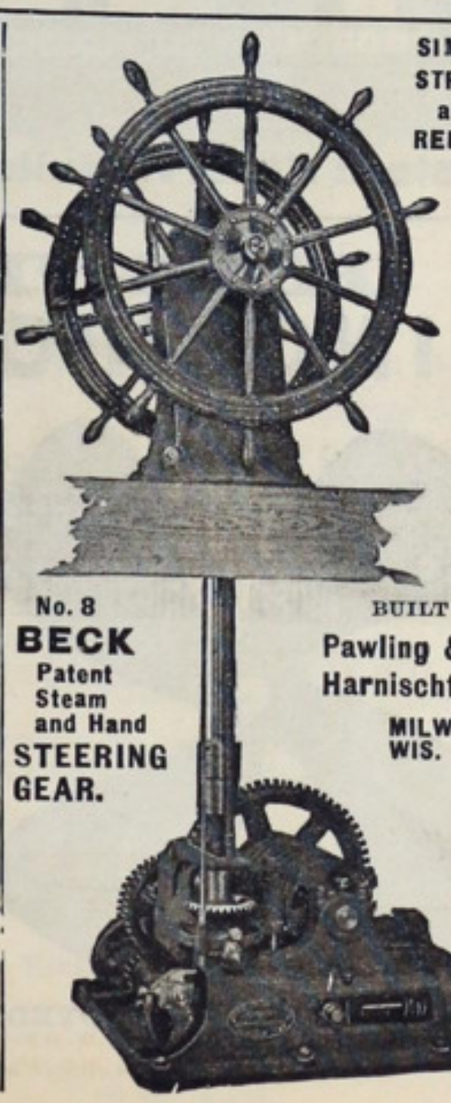

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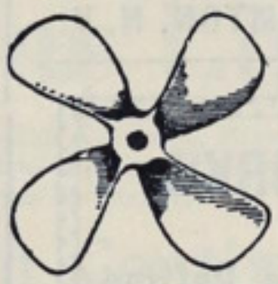

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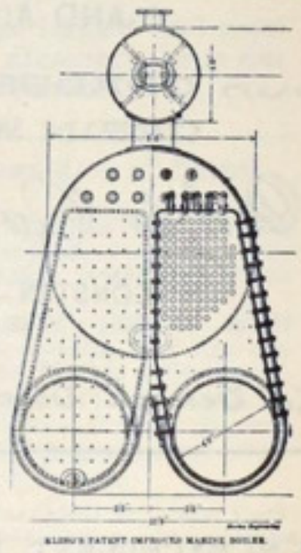

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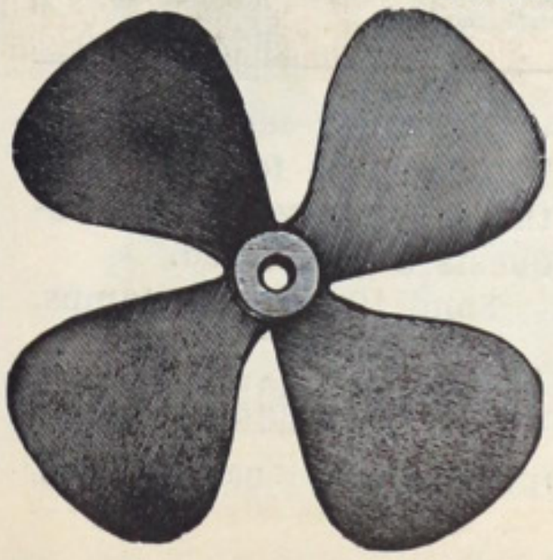

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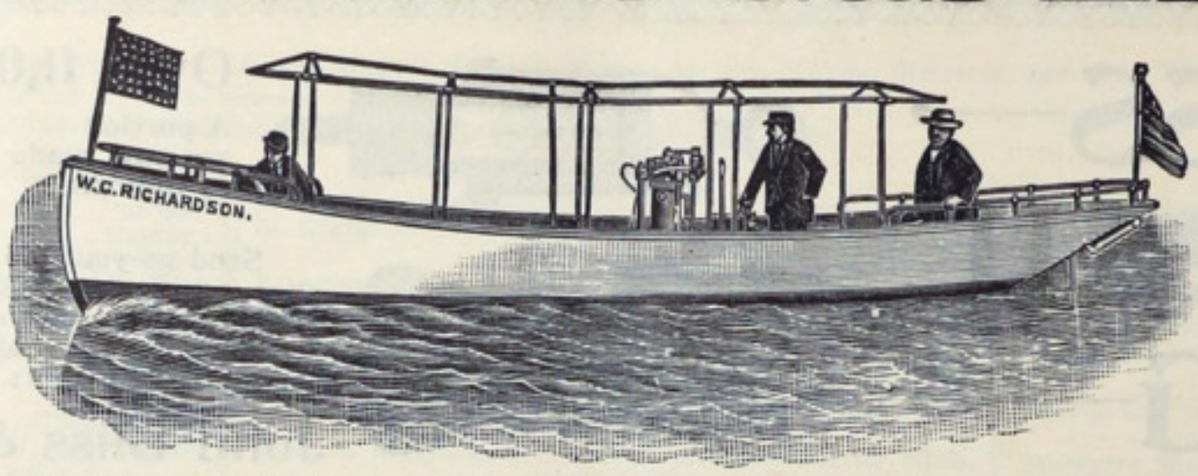

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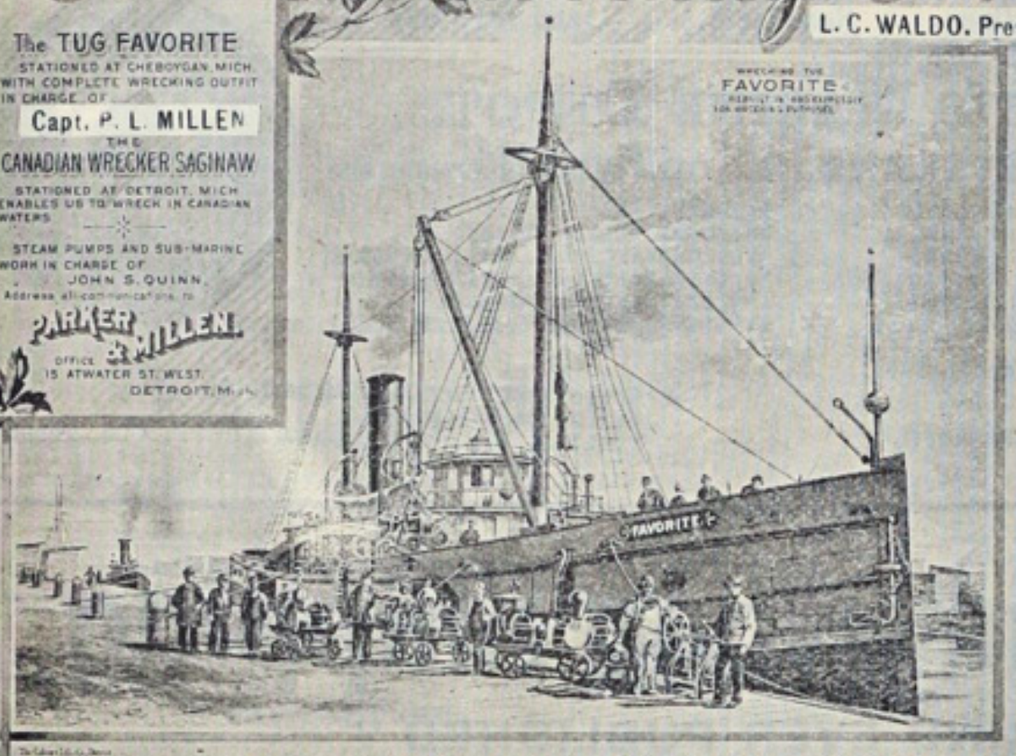

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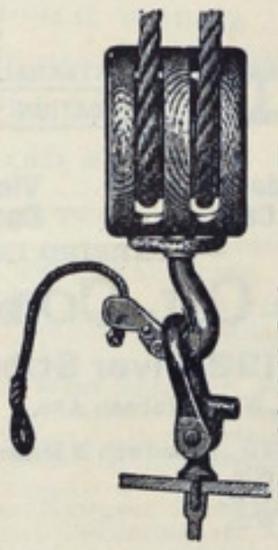

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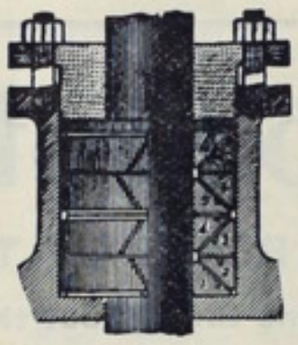

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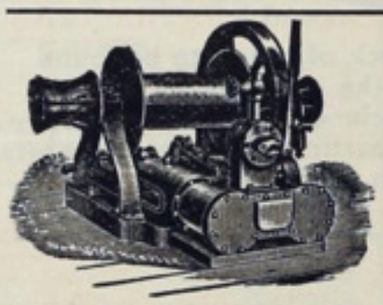

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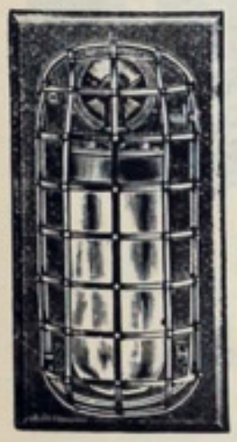

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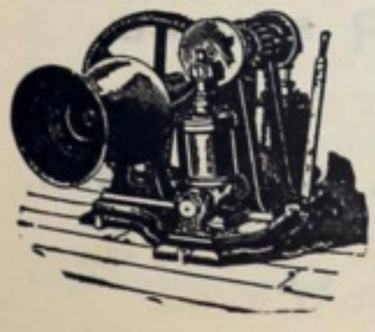

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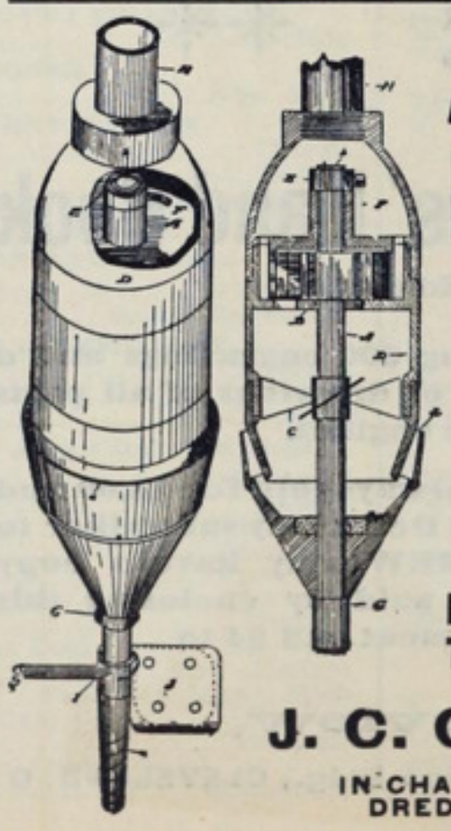

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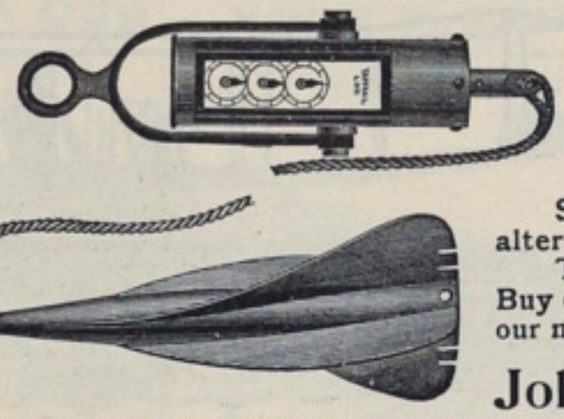

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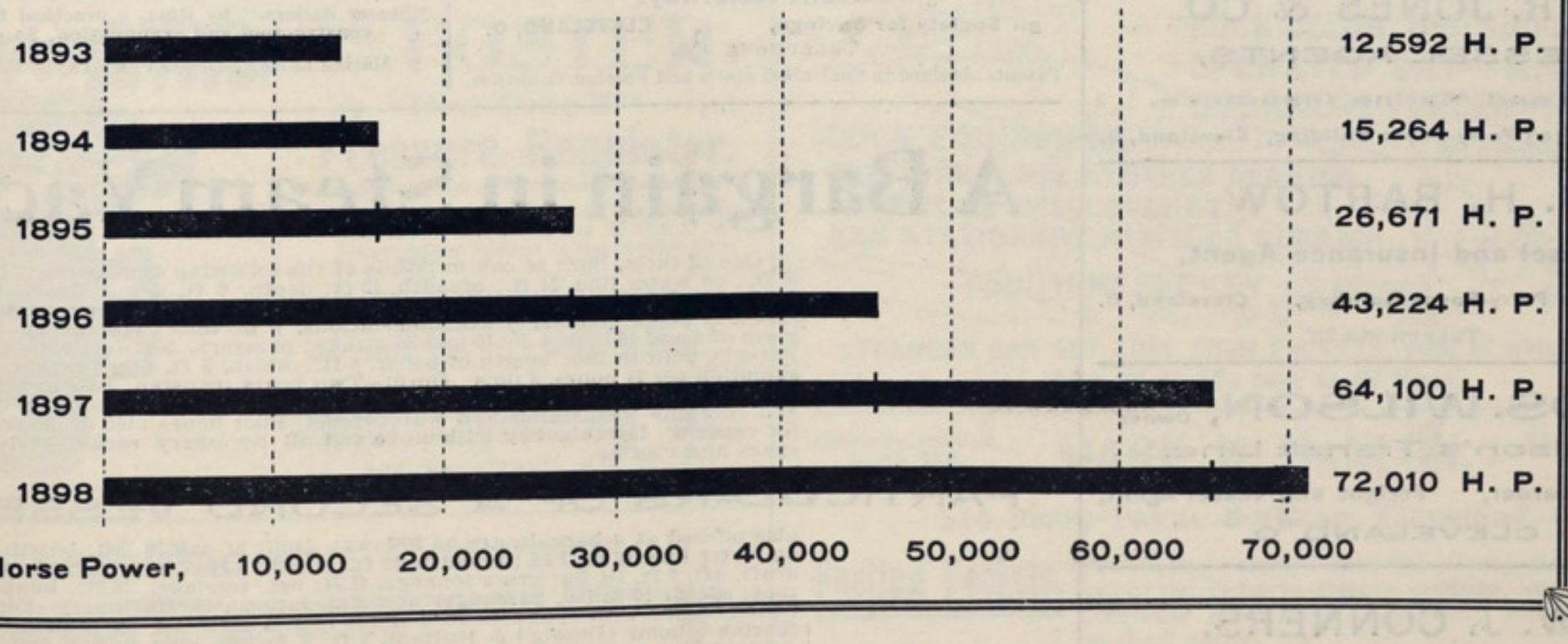

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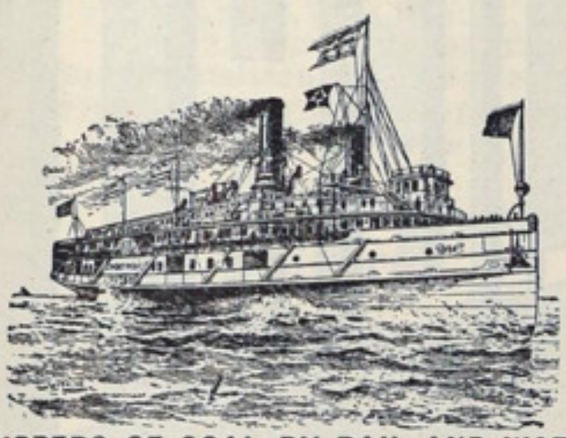

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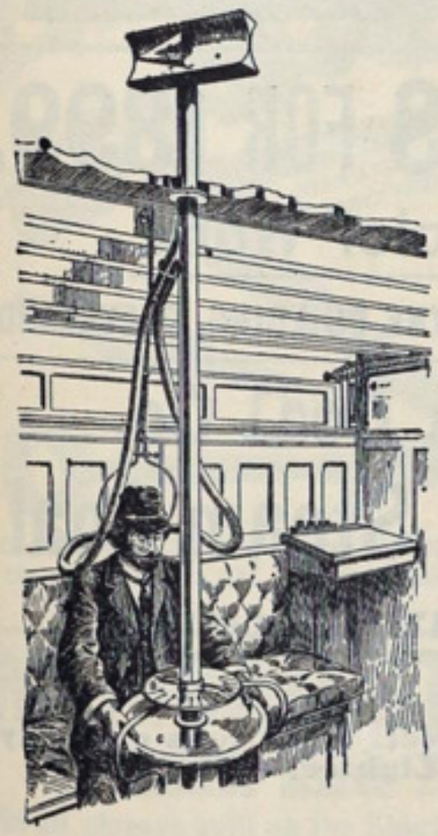

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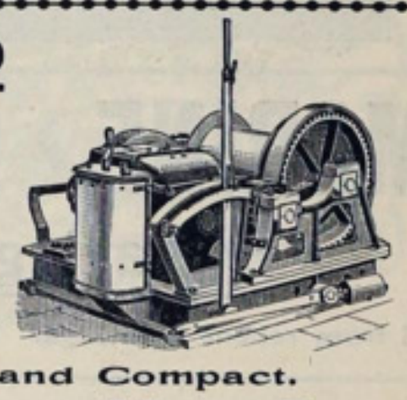

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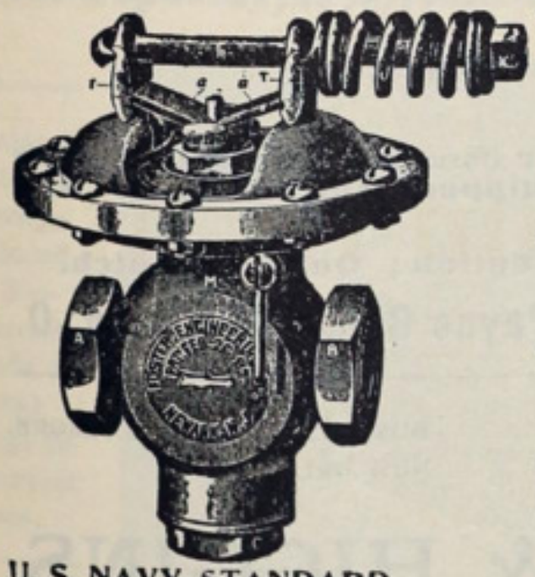

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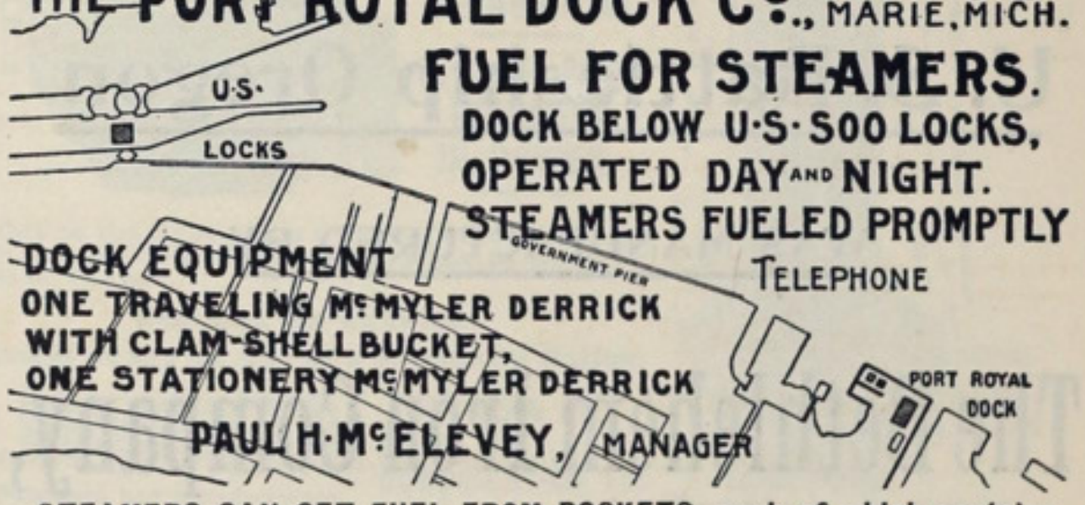

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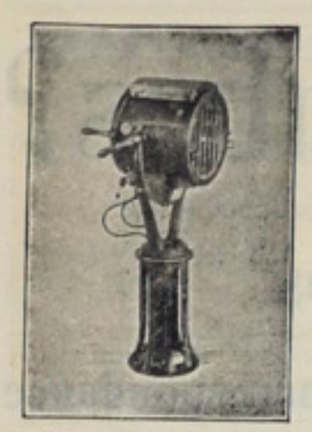

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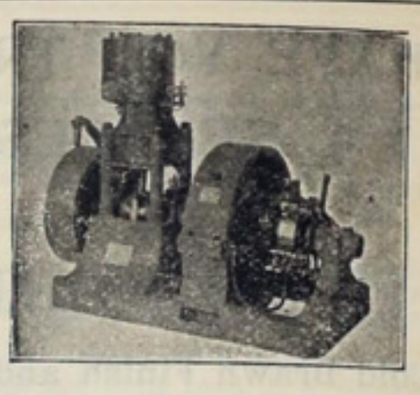

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"T. B. S.—W. D. L. NAVY DEPARTMENT, In reply refer to No. 29181.
Bureau of Supplies and Accounts,
Washington, D. C. June 10, 1898.

Gentlemen:

1. Please forward to the Commanding Officer, U. S. S. 'MARIETTA', Key West, Fla., 8 fire bricks, 4 rights and 4 lefts, No. R, 3440, Babcock & Wilcox boilers, to replace broken bricks between furnace doors.

2. Your bill for these articles should be sent to the same officer and should refer to Steam Engineering Requisition dated June 1, 1898.

Respectfully,

THE BABCOCK & WILCOX CO., 29 Cortlandt St., New York."

(Sig.) EDWIN STEWART, Paymaster General, U. S. N.

On her long voyage the MARIETTA was not detained an instant on account of boilers.

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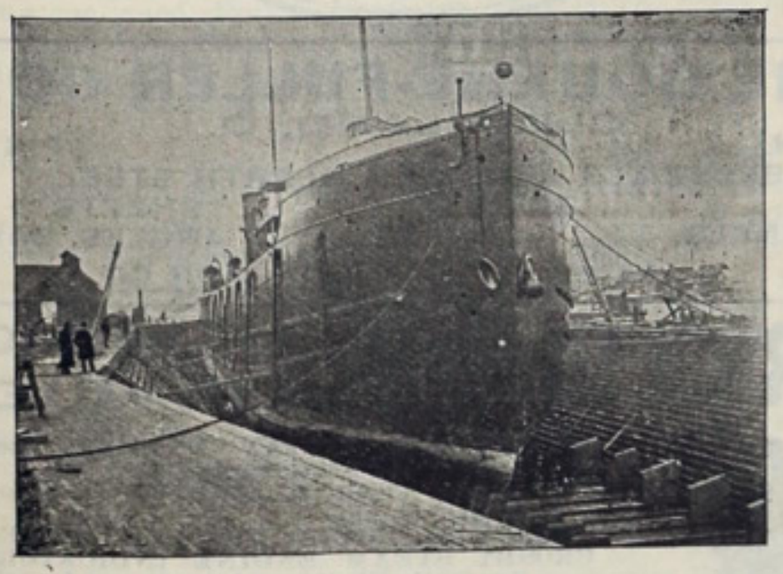

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SIZE OF DOCK.

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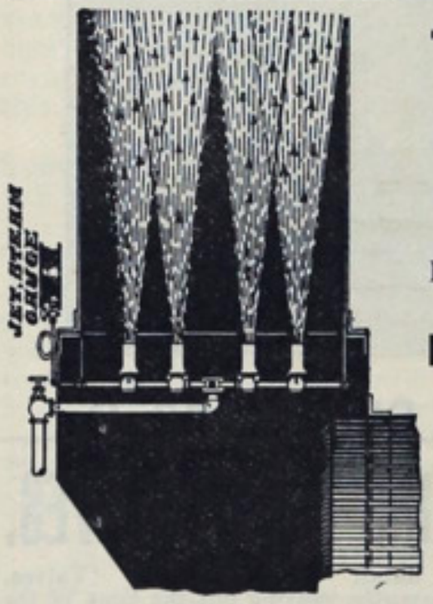

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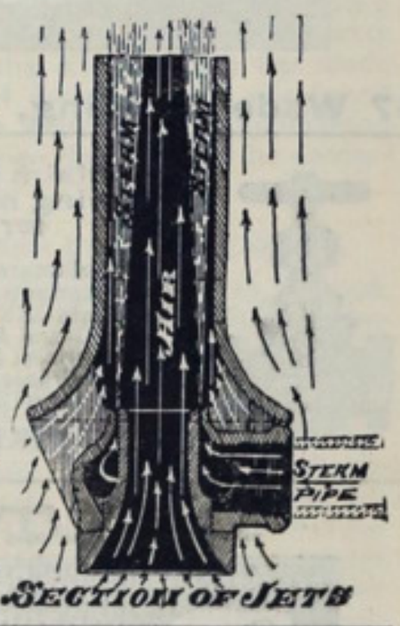

SECTION OF JETS

Cut on the right shows a section of Jet Castings, which are attached to Spider in stack, as shown by cut on the left.

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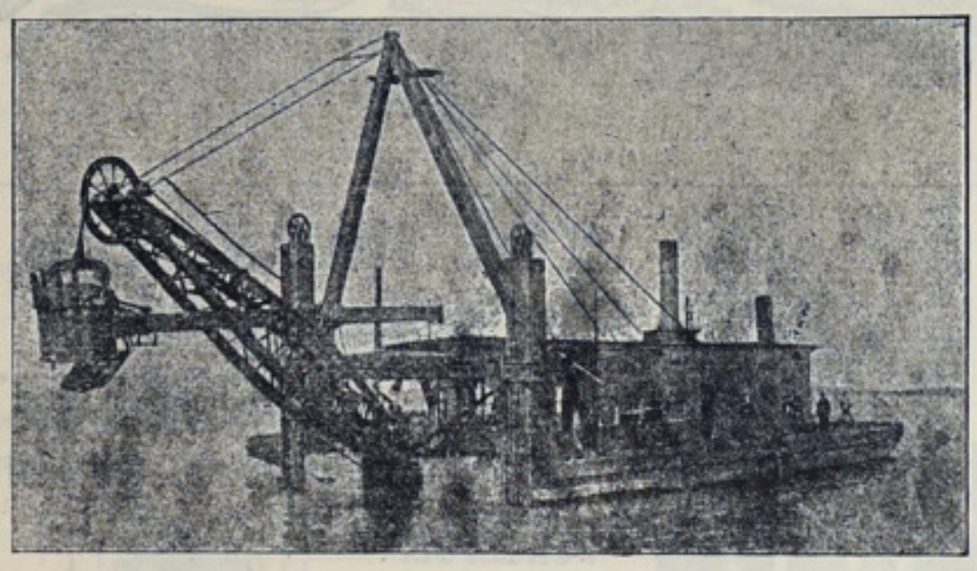

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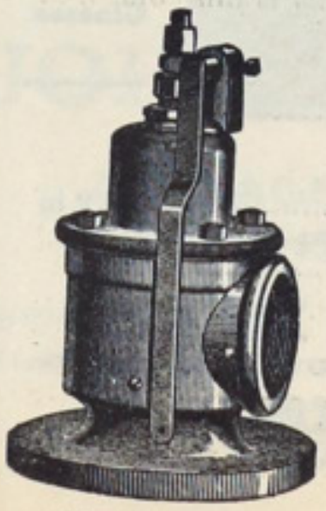

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